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Address.

ABDOMINAL PAIN.*

BY HENRY JACKSON, M.D., BOSTON.

I WAS pleased when your president asked me last June to read a paper before your society, though I had no new and startling medical data to bring before you. I considered carefully what subject to choose, and decided to try to reduce to some definite form the experience of a large general medical hospital service in the diagnosis, treatment and prognosis of the broad subject of abdominal pain.

I know that I must leave out some important factor which may be brought out in discussion; please consider that the personal pronoun does not by any means always mean simply my own views on doubtful points, but the opinion obtained by consultation with my colleagues.

Though most of my experience comes, of course, from hospital cases, I shall introduce a good many private cases, personal, or seen in consultation; I feel that the private case is often much more difficult to diagnose, a case in which often an immediate diagnosis must be made, yet we are deprived of some of the more intricate methods of diagnosis obtainable only in a well equipped laboratory.

In order to give some of my personal experiences, I shall speak of a few rare causes of abdominal pain, which may practically be of little value because they occur but seldom, yet when

they do occur, they may be of much value as suggestions for the appropriate treatment.

As most of you probably know, I speak only as a physician who may sometimes be right in diagnosis, yet must depend upon his surgical colleague for the proper treatment and subsequent care of the patient. In a large city, the physician is necessarily separated from the surgeon, perhaps not always an advantage to the patient. A friend of mine in a small town near Boston, said to me that he thought many lives were jeopardized when medical care was divided from surgical interference, adding that when he made a diagnosis of appendicitis, he went to his buggy for his instruments and operated then and there. But, taking it all in all, I feel a patient is safer in the hands of a man who devotes at least a large part of his time to surgery.

The causes of abdominal pain may be broadly divided into several different classes, which we will try to differentiate the one from the other:

1. Spasm of internal organs, of which gallstone colic may be spoken of as the type.

2. Pain of "nervous origin," the type of which is to be found in the crises gastriques of tabes; this is perhaps the most dangerous classification, as usually the diagnosis is wrong, and on the other hand, a good many diagnoses of ulcer of the stomach have been made when the pain and vomiting were only localized manifestations of spinal cord diseases.

3. Pathologic lesions of various internal organs: for instance, ulcers of various internal organs, as stomach, duodenum, etc. Under this head may be classified the pain due to volvulus

* Read at a meeting of the Essex North District Medical Society on October 11, 1916.

twist of the intestines and torsion of other organs.

4. "Referred pain." To my mind this represents the most dangerous type of abdominal pain. Such a diagnosis is permissible, justified, yet in each individual case the burden of proof lies upon the physician, and often requires the skill of a good surgeon to confirm the diagnosis of the physician. The most common cause, in my experience, is the very acute abdominal pain which may be associated with the onset of pneumonia; other practical points I can bring forward in the discussion of the various types.

5. The last, but, of course, the most common, and certainly the most important type, because amenable to immediate and successful treatment, —inflammation of the various internal organs, which eventually leads to peritonitis, local or general, with prompt recovery or tragic death, according to the knowledge and skill of the attending physician.

Into one of these five types I feel most and perhaps all cases of abdominal pain may be divided.

Before entering upon the discussion of the various types and causes of abdominal pain, certain broad principles may be enunciated which apply to all forms of pain, are of utmost importance, and must be held always before the mind when approaching the diagnosis of the individual case. The symptoms and signs of most importance are: Pain, tenderness, spasm, fever, vomiting, rapid pulse, all clinical phenomena which may be determined at the bedside, and represent the data on which in most cases we may make our diagnosis. We are often assisted, and our diagnosis confirmed, though not made, by the laboratory examination of the blood showing a leucocytosis which confirms our diagnosis of some acute septic process, or the urine demonstrating some acute genito-urinary condition which has caused the pain.

For the patient, pain is the main issue, but as pain is the chief question for the patient, so spasm and tenderness should be the paramount questions for the doctor. Fortunately, the question of pain is a doubtful factor dependent often upon the susceptibility of the individual, is a symptom in the specific sense, whereas, tenderness, with associated spasm, is a sign demonstrable to the physician, independent of the will of the patient, often most marked in narcosis, and the one most important sign on the presence or absence of which our diagnosis is made, and appropriate treatment instituted.

Pain may be really terrific, yet the patient is in no danger; spasm may be slight, yet show the surgeon that only an immediate laparotomy can save the patient's life.

I once received an urgent telegram to meet a patient at a certain hour on his arrival in Boston,—a most intelligent man who was far from neurotic. When I saw him he apologized for asking me to hurry, and said his pain had gone,

though during the day it had been very severe. I saw a man sitting at comfort in his library; he had a little fever. Examination showed sharply localized tenderness at McBurney's point, with definite spasm. Diagnosis, appendicitis, and operation three hours later showed a ruptured appendix, with an early localized peritonitis. He gave a history of having eaten some indigestible food, the diagnosis had been acute indigestion, and the treatment castor oil, followed by salts.

In this case, the absence of pain was really the most serious symptom, when associated with the definite tenderness and spasm, as it led us to consider that rupture was the probable cause of the relief of the pain.

Fortunately, spasm is not dependent upon the patient, or modified at his desire. Pain and vomiting are very common symptoms, which may be of much value to assist us in a diagnosis, but for the sake of safety, we should never make a diagnosis of acute indigestion, or green apple colic, when to pain and vomiting are added tenderness and spasm, whether fever be present or not; fever confirms the diagnosis, and often differentiates the type, but is not a necessary accompaniment of serious inflammation of the abdominal cavity in its early stages.

I regret to say that I have made the mistake of not attributing sufficient importance to a slight spasm; only last winter, in the City Hospital, we overlooked a case of acute appendix, though we considered the case carefully. Just as I left the bed, I noticed a rapid pulse on the chart, and regretted too late that I did not go back to review again more carefully all other signs. Of course I do not mean to suggest that I have always been able to make a correct diagnosis, but I have never regretted advising an operation, and, on the other hand, have bitterly regretted that an operation was done too late to save life, or when a generalized peritonitis made convalescence prolonged and hazardous.

Exceptions prove the rule, and in one case I, with several others, advised laparotomy in a case that turned out to be acute nephritis, yet as we reviewed the case at the time, we felt no other course was justifiable. Fortunately that case recovered.

In view of the recent widespread theory that operations for acute abdominal conditions are too frequent, it seems to me comforting that statistics can show that operations are rarely performed without adequate cause, and I am certain that most of us have cause to regret that we overlooked the importance of spasm, making a diagnosis of colic or nervous pain in a patient, who really had appendicitis or pus tubes. I know this has been my experience in a large general hospital, where the surgeons and physicians are in constant consultation and, what is perhaps more important, are always under the criticism of bright young house officers.

To reiterate: pain, tenderness, spasm and fever never mean indigestion.

I wish now to take up the various classes of abdominal pain, of which I have made five divisions.

1. Spasm of internal organs.

(a) Intestinal colic. The usual cause is the ingestion of some indigestible food, or an excess of proper food. As improper food is the usual cause of such a disturbance, vomiting may be added to the pain, irrespective of the severity of the pain, and this is a complicating factor which may cause much doubt in the diagnosis. In the elimination of more serious trouble, we may depend on the absence of tenderness, the pain being often relieved by pressure, the absence of spasm and no fever, with a relatively slow pulse. The appropriate treatment is starvation and catharsis. In constipation of long standing, masses of faeces may well cause doubt: I have made more than once a definite diagnosis of some abdominal tumor, and been proven wrong by the passage of enormous masses of faeces. I saw in consultation years ago an old lady, merely to give an opinion as to the safety of either for a laparotomy. I suggested faecal masses, and was pretty sure I was right, when her doctor said she had constant watery movements. She was cured, and is today well, after the rectum was mechanically emptied, and she had large doses of castor oil.

In a doubtful case, give no food, avoid opium, and try enemas, aided sometimes by small doses of belladonna.

(b) Gallstone colic: sudden in onset, often with a history of antecedent "indigestion," and perhaps as a sign, other attacks of abdominal pain. No fever, and for some reason that is not plain, even in the absence of jaundice, a pulse normal in rate and often slow. The pain may be intense, situated in the upper abdomen, and often radiating into the back; the pain may stop as suddenly as it began, so care must be used in giving morphine. The proof of the cause of the pain is furnished by the appearance after two or three days of slight jaundice. The immediate treatment is morphine. If fever and tenderness high up in the abdomen appear in a day or so, we must be on our guard for cholecystitis, a condition that has occurred in patients of mine, who had previously weathered more than one attack of apparently simple gallstone colic.

My own feeling is that delay in operating for gallstone colic after more than one attack is unwise. Many Boston surgeons favor operation after one definite attack, unless some circumstances especially contraindicate an abdominal operation.

(c) Renal colic. As in gallstone colic, the onset is sudden; the pain radiates towards the groin, and is often felt as a sharp pain in the penis. As I have seen it, it is a most agonizing pain, often accompanied by a pulse much more

rapid than in gallstone colic; a complicating factor in diagnosis is found in tenderness which may be felt along the course of the ureter, and I have known of a case in which a stone caught in the ureter required laparotomy, and led to a possible diagnosis of appendicitis. The pain is much more apt to be intermittent than in gallstone colic. Within a few hours, or at most a day, we almost invariably find in the urine a few fresh red blood globules, not a haemorrhage, but a few cells which must be sought for by the microscope. We must watch carefully for several days for the stone. Treatment: morphine, and large amounts of an alkaline water.

(d) Ptomaine poisoning. Intense abdominal pain, vomiting, collapse, with cold sweat, and a rapid pulse. This is so rare that I always take it for granted that such a diagnosis is not permitted. I never saw a case, though last winter two very alarming cases followed eating partridge recently shot by a prominent surgeon, who was one of the victims. I have several times been called in consultation to cases of ptomaine poisoning, but always found some other condition, one the rupture of an extra-uterine pregnancy, one abortion due to passage of a sound, and others, some acute septic condition of the abdomen.

I, of course, refer to a serious, acute condition, and have no quarrel with a man who cares to designate as ptomaine poisoning any acute form of indigestion caused by decayed food, and in certain individuals, by various articles of diet harmless to most people.

2. Pain of nervous origin. Tabes may lead to many errors. The sudden onset of the crisis gastricae, with vomiting, and sharp abdominal pain, may well suggest the diagnosis of some acute essential abdominal lesion. I have seen several cases in consultation in the hospital, and once in private practice in which this mistake was made. There, of course, the absence of fever is the first point, and the subsequent diagnosis of a probable locomotor ataxia from the classical signs of this disease confirm the opinion. The main symptoms of acute abdominal disease—spasm and tenderness—are lacking. Aside from tabes, acute inflammation of the lumbar nerves, or even sciatica, may give rise to some doubt.

3. Pathologic lesions of various internal organs.

In this class of diseases the most mistakes are made, and we meet the most dangerous class of cases. Here spasm and tenderness take front rank to show the surgeon that he is not dealing with a case of colic, or other type of acute indigestion. I have seen many mistakes made, and many lives saved by the definite diagnosis of some organic lesion, curable by a prompt laparotomy. The onset is sudden, the pain intense, usually the pulse rapid and out of all proportion to the general condition of the patient; the pain is due to a mechanical condition, not to inflammation, so at the onset of such cases, an im-

portant sign is the absence of fever, and the leucocytosis which accompanies any and all inflammatory processes.

A lady of 60 years of age had had for several years much pain, considered as probably due to a condition of the heart known to exist; she had also what she called "neuralgia" of the abdominal wall. There had been no symptoms to suggest any acute stomach disease.

I was called to her on account of acute colicky pain which followed immediately after a very rich and very indigestible luncheon. From the first I was anxious, as her symptoms were different from what I had seen before. Pulse rapid, and general appearance indicated the grave condition called by the surgeon "anxiety," so hard to describe, and so important in prognosis.

In a few hours spasm and definite tenderness made me call a surgeon. He was sure it was colic.

A laparotomy nearly 48 hours later showed a perforated gastric ulcer. This case was most carefully watched, and all possible causes of the abdominal pain were considered, yet a fatal mistake was made, due, I felt at the time, to the fact that spasm and tenderness were not given their proper due, in a person of a very nervous temperament, who had weathered many an attack of abdominal pain. A careful review of her previous history did not suggest to us a probable history of gastric ulcer.

Twist of the pedicle of an abdominal tumor has several times given me much satisfaction as the cause of an acute abdominal pain, which was cured by a prompt laparotomy; extra-uterine pregnancy belongs in a similar class, though here the collapse and rapid pulse with the secondary blanching of the countenance, due to internal haemorrhage, are factors of much value in diagnosis. The most severe case of "ptomaine poisoning" to which I was once called turned out to be the rupture of an extra-uterine pregnancy in a woman well past forty years, who had never been pregnant to her knowledge; she recovered after laparotomy.

In lesions of this class, the differential diagnosis is often impossible, but fortunately the treatment is the same, laparotomy, the important point being to recognize that we have to deal with some definite organic lesion of the abdominal organs, and not with a severe case of colic, due to simple spasm.

I need hardly mention that acute pancreatitis should always be considered, though rarely definitely diagnosed; prompt laparotomy may cure even this so fatal disease, as in two cases to my knowledge, one a case seen in consultation in which the probable diagnosis of perforated gastric ulcer was made, and one that of a prominent Boston doctor, in which Dr. Richardson made, before operation, the probable diagnosis of haemorrhagic pancreatitis. I do not know on what grounds he made the diagnosis, or how certain he felt of the opinion given.

I wish especially to emphasize two lesions which may well give rise to much doubt, one comparatively common, and one rare, though worthy of consideration, namely purpura haemorrhagica, and acute nephritis.

I have seen on the surgical side of the hospital several cases admitted for appendicitis, or some other acute abdominal condition, that turned out to be purpura haemorrhagica; in such cases there are undoubtedly spots of purpura in the intestinal tract which give rise to the symptoms. The cases are made more doubtful, as there is often associated fever, and the patient may be pretty sick. The diagnosis is usually made by the finding of a few purpuric spots on the extremities, and possibly by blood in the urine, or haematemesis. A case seen in private consultation practice was considered as probably ulcer of the stomach, with possible perforation; the finding of many purpuric spots made the diagnosis clear, and recovery was complete. That the danger is real and not rare, is proved by the fact that in several cases laparotomy has been performed by good surgeons in patients who subsequently developed a perfectly typical purpura. The areas of purpura in the intestinal tract cause undoubtedly a certain amount of tenderness, hence the associated spasm which adds materially to the difficulty of diagnosis.

Acute nephritis: This disease has twice caused great doubt in my mind as to the existence of some acute inflammatory abdominal trouble. Once in a hospital case which was seen by several medical and surgical men, a mistake was made, and a useless laparotomy performed; fortunately the girl recovered. The case was published by the late Dr. John C. Munro, in a review of mistakes in abdominal surgery. Even after our mistake was proven, we all agreed that in a similar case we should advise the same treatment.

The other was seen in private consultation, an indefinite case of gripe, with much abdominal pain, and some tenderness across the upper part of the abdomen. I was called by a surgeon. The diagnosis was obscure, gripe was eliminated, and the diagnosis made by finding a very acute nephritis, with much blood, and many casts indicative of an acute Bright's disease. Complete recovery followed.

So I feel sure that though kidney disease does not cause backache, it may cause acute and severe abdominal symptoms.

From one point of view, the comforting statement may be made that laparotomy is the proper treatment for the severe cases of abdominal pain, not due to some colic or nerve disturbance. My experience in hospital practice is not that operation is done too often, but is neglected in cases that cannot recover under medical care.

4. "Referred pain." As I have already said, this kind of pain represents the most dangerous type of abdominal pain. I refer not to pain

due to lesion of some specific nerve, as in tabes, but to pain referred to the abdomen, when the lesion is situated far removed from the abdominal organs.

The most common cause of such pain is pneumonia. I have been several times called in consultation to give an opinion as to the wisdom of operation, when my diagnosis was a beginning pneumonia. A negative factor of importance is the high temperature of the early stages of pneumonia, and another factor of value, increased respiration, with the finding of an area of diminished respiration.

In a patient of my own, I watched with much anxiety a case of sudden abdominal pain, with secondary vomiting; no cough, but high temperature, in which definite signs of pneumonia did not develop for 36 hours. I have also seen several cases of perfectly typical pneumonia, in which laparotomy had been done for appendicitis within a day or so, not cases of lobular pneumonia, which might have been due to ether, but cases of normal lobar pneumonia.

Peritonitis is not a disease associated at the start with high fever, and opposite to acute pulmonary diseases, the pulse rate is increased out of proportion to the respiratory rate, and the height of the fever. The final diagnosis, of course, depends on the presence or absence of definite localized tenderness and spasm.

Acute attacks of heart trouble often give rise to similar doubts as to the existence of some acute abdominal trouble; and, also, though more rarely, that disease so difficult of diagnosis, acute pericarditis.

5. The most common acute inflammation of the internal organs—appendix, pus tubes, abscesses in the lower part of the abdomen, or of various new growths or tumors of the abdominal cavity.

Personally, I have no doubt that operation is the proper treatment for any definite inflammation of the appendix. I have never in my own practice, or in consultation, been able to recognize signs that could make a surgeon sure that he had to deal with a mild catarrhal trouble of the appendix that would speedily get well, and not with a localized trouble that would surely lead to rupture, and secondary peritonitis.

I have been sorry that I have not urged operation, but have so far not regretted that operation had been done for a supposed or probable appendix. Of course the older men have seen many a case of acute appendix recover promptly under medical treatment, but I know no safe rule to decide that one should wait.

If you feel that I have bored you with platitudes, and the recital of trite cases, please pardon me, as I have tried to present to you in short form the views of myself and my surgical colleagues on a matter of great importance, and one that has interested me much in a hospital service of twenty-five years.

Original Articles.

THE BENEFICIAL RESULTS OF PRE-NATAL WORK.

BY MICHAEL M. DAVIS, JR., PH.D., BOSTON,

Director of the Boston Dispensary.

ORGANIZED effort for the reduction of infant mortality has usually begun, in the United States, with attempts to improve the care, feeding and milk supply of babies during the first year of life, with the special hope of diminishing the deaths from diarrhea and other gastrointestinal diseases which levy so heavy a toll of life, particularly during the warm months of the year. From this beginning in many cities, the campaign against infant mortality has broadened in two directions. On the one hand, it has been extended throughout the year, instead of being confined to the summer; it has come to deal with general hygiene of the babies and the family, and with other diseases than the gastrointestinal; it has, in some instances, been extended later than the first year of infancy.

On the other hand, the campaign has also been pushed back to the time of birth, and before it. Prenatal work is now a recognized part of the nationally organized campaign for the reduction of infant mortality. Since the aim of this paper is to present some of the results which it has achieved in certain sections of Boston, it may be well to begin by formulating the definite purposes and means of prenatal work:

1. By making proper medical examination, pelvic measurements, etc., of pregnant women, before confinement (when possible, some months before), to decide whether normal delivery is possible or likely, and to give such medical advice as may be indicated for the comfort and safety of all women, and in particular when hospital care and operation are necessary.

2. By visits from a trained visiting nurse and reports to the physician, during the course of pregnancy, to instruct the mother and father in the hygiene of pregnancy, and to make the best possible preparation of the home for the sake of the coming child.

3. By expert medical care at confinement, to minimize the risk of delivery to mother and child.

4. By frequent visits from the nurse during the two weeks or so following confinement, to provide needed bedside care to the mother and give the baby the best start possible.

The Instructive District Nursing Association of Boston has developed this branch of its service until its nurses now care for over two thousand cases annually. This is about one-tenth of all the births in Boston. In certain districts, such as the North and West Ends, the proportion rises as high as one-third, while in some of

the outlying sections the percentage is small. Table I gives this percentage for all wards of the city for the year 1914.

The medical service for the preliminary examination of the pregnant woman, and the obstetrical care at confinement, is provided for the District Nursing Association by private physicians to a certain extent, but in greater proportion by organized agencies.* Of these, the Boston Lying-in Hospital is the largest; in addition there are the Mount Sinai Hospital (recently closed), and the Committee on Prenatal and Obstetrical Care of the Women's Municipal League; the nurses of the District Nursing Association work with the physicians of all these agencies. A few visiting nurses are provided by local societies, doing prenatal work unconnected with the District Nursing Association, but the number of cases cared for by these is relatively few.

A type of public health work which has grown in recent years until it now reaches one in ten of the population that might possibly be affected by it, should have attained a point when its beneficial results can be demonstrated by statistics, as well as believed in by the faith that moves mountains. The present study has been made with the aim of estimating results. It covers the prenatal work carried on by the Instructive District Nursing Association in five wards of Boston, during the years 1914 and 1915. It is gratifying to find that, not only do we secure useful figures showing the amount and character of the work done for mothers and babies, but also evidence that a very substantial saving in infant lives has been achieved.

METHOD OF THIS STUDY.

We selected Wards 1 and 2, constituting East Boston (estimated population 58,500 in 1914), and 13, 14 and 15, constituting South Boston (population, 66,300). East Boston is a section in which the Out-Patient Department of the Lying-in Hospital does not work, while in South Boston this service has been considerably developed. The medical work in East Boston, in connection with the District Nursing Association, was done by the Committee on Prenatal and Obstetrical Care, of the Women's Municipal League (cooperating with the Maverick Dispensary), the Mount Sinai Hospital, and by private physicians. In South Boston, practically only the Lying-in Hospital and private physicians were concerned.

Every case which had received prenatal care by the District Nursing Association in these wards, during the years 1914 and 1915, was located in their records, and certain data tabulated therefrom. The cards from which these

* The principles and methods of prenatal work have been outlined by a group of specialists, with Dr. Edward Reynolds as chairman, acting as an advisory body to the committee of the Women's Municipal League above referred to. Their statement was published in the BOSTON MEDICAL AND SURGICAL JOURNAL, April 28 and May 6, 1915.

tabulations were made were then taken to the office of the Registrar at City Hall and looked up in the records of deaths. All the cases in which babies who had prenatal care had died within one year after birth, were recorded. The age at death, and the cause as stated on the death certificate, were also tabulated.

Finally, the card records were taken to the office of the Baby Hygiene Association and compared with their index so as to ascertain the number of cases which had received the care of the milk stations of that organization, and the number which had not.*

EXTENT OF THE PRENATAL WORK.

In East Boston, in 1914, there were 2025 births recorded, of which 103, or 5%, received prenatal care. In 1915 the number of births was 1959, and the number of prenatal cases was 113, or 6 2/3%. In South Boston, there were 1769 births in 1914, and 250 cases (14.2%) received prenatal care. In 1915 there were 1725 births, of which 264 received prenatal care, this being 15.3%. The number of cases in each ward, the nationalities of the mothers, the number of pregnancies and the number of miscarriages are shown in Table II in the Appendix.

In giving prenatal care it is naturally desired to begin as long as possible before confinement, but this is not easy, because mothers often fail to appreciate the importance of seeking advice until very near the time of delivery. The figures just presented indicate that prenatal work, in proportion to the population, is increasing in South Boston and East Boston. They also show that progress is being made in getting at the mothers earlier in pregnancy. In 1914, one-fifth of the mothers had prenatal care for only a week before confinement, but in 1915 this proportion had sunk to one-eighth. On the other hand, the proportion of mothers receiving prenatal care for five weeks and over was only about 50% in 1914, and had risen to nearly 60% in the next year. Detail figures are given in Table III.

There has been considerable discussion as to the frequency with which the nurse should visit the home during the prenatal period. Ordinarily this would depend on circumstances, such as the mother's condition, the character of the home and other local details. But in general, a visit about every ten days is desired and expected according to the prevailing standard. The following table shows that this standard is maintained in a great majority of cases, and again indicates improvement in 1915 over 1914:

* The work of collecting and tabulating the data was performed by Miss Mildred A. Davis and Miss B. H. Gallagher, students at Simmons College, to whom, as to their instructor, Prof. Sara H. Stiles, I am much indebted. Grateful acknowledgment is also made to Mr. Edward McGlenen, City Registrar, for access to the records, to Dr. William H. Davis, Statistician of the Boston Health Department, for birth statistics and for helpful advice; and to the Instructive District Nursing Association and the Baby Hygiene Association of Boston.

TABLE A.

AVERAGE PERIOD BETWEEN NURSES' PRENATAL VISITS TO THE HOME.		1914	1915
Less than 7 days	57	59	
7 to 10 days	85	154	
10 to 14 days	109	134	
14 days and over	95	41	
Incomplete records	7	6	
	333	394	

The great majority of cases are delivered in the home. In 1914, 337 of the 353 cases were delivered at home, and in 1915, 376 out of 394. Only 9 cases were delivered at hospitals in 1914 and only 13 in 1915. Seven cases in the former year and 5 cases in the latter year showed incomplete records, and could not be tabulated in this respect.

Prenatal care by the nurses was given to almost all the cases delivered at home, viz., 335 cases in 1914 and 372 in 1915. The details of the postnatal care, as shown in Table IV in the Appendix, indicates that in the majority of cases a daily visit is made by the nurse for a period usually of ten days to two weeks. The woman, of course, saw the physician in her home, or at the clinic, as necessary.

To summarize:

Prenatal care in East Boston and South Boston, two sections of the city with an aggregate population of about 125,000, was given during 1914 to 9.3% of all births, and in 1915 to 10.7%. The prenatal care consisted of the medical examination of the expectant mother in the majority of cases by a specialist in obstetrics from some organized agency, and in the remaining cases by the family physician. The educational and the advisory visits of the nurse to the home began, in the majority of cases, more than five weeks before confinement, and were made at weekly to fortnightly intervals, up to the time of delivery. Confinement in almost all cases took place at home, less than 4% going to hospitals. Following confinement, intensive postnatal care by the visiting nurse, under the physician's supervision, was carried on for a period of between ten days and two weeks.

HOW SHALL RESULTS BE TESTED?

Now what are the results, and how shall we measure the results? We cannot measure the mothers' ease of mind, the comfort at and after confinement, the hygienic improvements wrought in the mothers' condition and in the homes. Results can be measured only by comparing concrete evidences in these prenatal cases with corresponding data of cases in the same districts who had not had the benefits of prenatal care. The only definite data that are available are the death records.

STILL-BIRTHS.

In 1914, of the 353 prenatal cases, there were seven still-births (no miscarriages). This is 2% of the living births. The proportion of

still-births to living births in Boston, as a whole, for the same year, was 4%. In 1915, there were 8 still-births (also one miscarriage) out of the 394 prenatal cases. This again is 2%, half that among the general population.

DEATHS AND DEATH RATES.

Of 346 living births, in 1914, 13 babies died within one year after birth. Table V in the Appendix gives each death by age, cause, and length of prenatal care. Thirteen deaths among 346 living births, gives a death rate of 37.5 per thousand. In the same wards for the same year, 1914, the death rate among the 3438 babies who had not had prenatal care, was 109.3, almost three times as high.*

Since prenatal work should be expected to reduce the large number of deaths of babies during the first month of life, the comparisons of this early period will be of especial interest. We have been able to make this comparison for two years, 1914 and 1915. The results are noteworthy. The actual deaths, by wards, on which these rates are based are given in Table VI, in the Appendix.

TABLE B.

COMPARISON OF DEATH RATES, PRENATAL WITH NON-PRE-NATAL CASES, 1914 AND 1915, IN FIVE WARDS OF BOSTON.

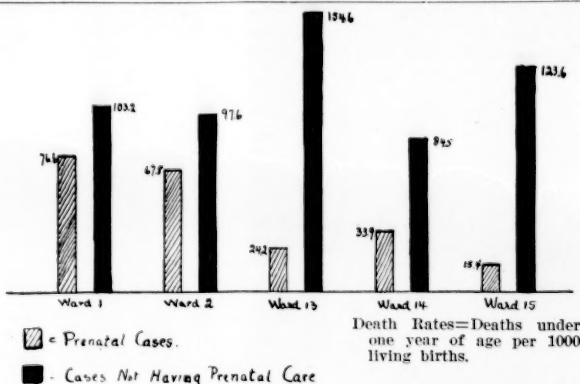
PRENATAL CASES	DEATH RATE UNDER ONE WEEK OF AGE		DEATH RATE UNDER ONE MONTH OF AGE	
	CASES NOT RECEIVING PRE-NATAL CARE	CASES RECEIVING PRE-NATAL CARE	PRENATAL CASES	CASES NOT RECEIVING PRE-NATAL CARE
1914 ... 11.5	34.3	17.3	1914 ... 11.5	46.5
1915 ... 15.5	27.9	25.9	1915 ... 15.5	39.7

Death rates are per 1000 living births.

These figures mean that when we compare the deaths of babies in 1914, under one week of age, we find that the death rate of those who had not prenatal care was *three times as high* as among those who had. In 1915 the death rate was *twice as high*. The same proportions hold in both years, for the deaths under one month of age.

Examination of the detail figures by wards, in Table VI of the Appendix, confirms these statements. The death rate for the first year of life, in every one of the five wards, shows a reduction, usually very large, for the prenatal cases in 1914, as compared with those not having prenatal care. This is graphically portrayed in the following chart.

* In making these and the following comparisons, one point must be borne in mind although it does not, in any material way, affect the value of the figures. The deaths of the babies in the prenatal cases born in 1914 are obtained by following each individual birth throughout the first year of its life to see if it died during that period. Some of the thirteen prenatal cases who were born during 1914, but who died during their first year, died in 1915, not during 1914. The deaths of the babies not receiving prenatal care are simply the deaths which occurred during 1914. Some of the babies who died during that year were, of course, born during 1913. This point is of more interest as a matter of curiosity, for it does not substantially affect the comparison of rates.



PRENATAL VERSUS NON-PRENATAL DEATH RATES, IN 5 WARDS, 1914.

The death rates for the individual wards among the prenatal cases are based on too few individuals to be trustworthy for the age periods under one week and under one month, but are reliable for the longer age period of one year. At this time, we cannot make a comparison of the death rate *under one year* for the prenatal cases of 1915. For that we must wait until the end of 1916. Then we shall look up those babies who received prenatal care and who were born during the later part of 1915, and ascertain whether or not they were alive at the end of their first full twelve months. The comparison of the 1915 babies who died up to the age of one week, or one month, can, however, be made now, without waiting until the end of the year, and these have, therefore, been presented.

In 1914 we find a further interesting fact, namely, that the death rate among the prenatal cases, between the ages of one month and one year, was only 20.2 per thousand, while among the babies of the same wards not receiving prenatal care, the death rate between the ages of one month and one year was 62.8 per thousand. The same comparison in 1915 cannot be made until after the close of 1916. A further paper will then be published on this point, with the view of bringing the effect of the prenatal work, so far as indicated, upon the infant death rate after the close of the first month of life. Just one comment seems pertinent now, namely, that the medical advice and the nursing care during the prenatal period would doubtless increase the amount and lengthen the period of breast feeding, as compared with the mothers not receiving prenatal care. This fact alone would have a very large influence upon the death rate of babies between the first and the twelfth month of life.

CAUSES REDUCING THE INFANT DEATH RATE.

It is one thing to show a reduction in death rates, and quite another thing to determine the

causes which brought it about. How far are the large reductions in death rate, indicated by this study, due to the prenatal work? We may be certain that the lowered death rates during the first week and first month of life are not due to post-natal care given by milk stations or other agencies, inasmuch as these practically never reach babies until a later period. The examination made, as stated, of the files of the Baby Hygiene Association, also showed that less than 20% of all the prenatal cases, in either year, were taken care of by that Association. We do not know of any organized agency which did work with any considerable proportion of these prenatal cases in these wards during the two years covered by this study. The nurses of the Boston Department of Health visit all babies shortly after birth; their influence could not, therefore, exert a differential influence in favor of any one group of babies.

The question arises whether the prenatal work selects a group of mothers who, for one reason or another, would naturally have unusually healthy babies. Two points may be considered pertinent,—the economic condition of the families, and the intelligence of the mothers. As to the first point, the prenatal cases are, in fact, drawn mostly from families of low income. Patients of any social class are accepted and, as already stated, a certain number of patients of moderate means, employing their private physicians are found among the prenatal cases of the District Nursing Association. But the proportion of families in East and South Boston employing their own private physicians is small, over four-fifths of the cases receiving the medical service practically free, through the Boston Lying-in Hospital and other agencies. Generally speaking, then, the economic conditions of the homes are not favorable to a low infant death rate. As to intelligence, it is probable that women of unusually low intelligence would not seek or be interested in accepting the prenatal work. On the other hand, we have no rea-

son to believe that the mothers who receive prenatal care, represent any higher order of intelligence than the *average* of their locality. The mixture of nationalities, shown in Table I, indicates that there is no preponderance of any one race group which would suggest any special influence on the death rates.

CONCLUSIONS.

1. A comparison of the death rates of 731 babies whose mothers received prenatal care in five wards of the city of Boston during the two years 1914 and 1915, shows that the death rates were reduced to one-half or one-third those found among babies not receiving prenatal care in these wards during the same period.

2. This reduction is found among babies during the first week of life, during the first month of life, and during the first year of life, taken as a whole.

3. The proportion of still-births, in each year, is only half that among the general population.

4. As it is known that only a small proportion of these babies received any other organized medical or nursing supervision, the reduction in death rate is apparently to be attributed to the prenatal work.

APPENDIX.

TABLE I.

I. D. N. A. PRENATAL CASES IN PROPORTION TO BIRTHS IN BOSTON, 1914.

NO. OF WARD	BIRTHS, 1914	1. D. N. A. PRENATAL CASES, 1914	% CASES OF BIRTHS
1	871	40	4.59
2	1154	69	5.97
3	324	16	4.93
4	302	6	1.98
5	263	14	5.77
6	1875	176	9.33
7	359	127	32.59
8	1069	545	51.02
9	700	242	34.57
10	315	17	5.39
11	408	165	40.44
12	425	27	6.35
13	661	126	19.06
14	580	63	10.86
15	518	70	13.51
16	608	26	4.27
17	654	27	4.12
18	526	65	12.35
19	752	55	7.04
20	1371	40	2.91
21	608	19	3.12
22	683	35	5.12
23	756	19	2.51
24	1111	21	1.89
25	720	...	...
26	424	15	3.53
Unknown (ward) ..	71	...	...
Non- residents ..	1303	...	...
Unknown ..	52	...	...
All Boston	19462	2025	10.40

TABLE II.

PRENATAL CASES OF THE INSTRUCTIVE DISTRICT NURSING ASSOCIATION IN WARDS 1, 2, 13, 14 AND 15 OF BOSTON, MASSACHUSETTS, 1914 AND 1915.

WARD	1914	1915
Total cases	353	394
1	40	79
2	63	51
13	126	130
14	59	70
15	65	64
TOTAL	353	394
BIRTHPLACE OF MOTHER.		
Ireland	60	62
Italy	63	52
Lithuania	21	17
Poland	20	22
Russia	42	65
United States ..	104	111
Other Countries ..	40	47
Not recorded ..	3	18
TOTAL	353	394
NUMBER OF PREGNANCY.		
First	52	89
Second	54	75
Third	53	59
Fourth	55	51
Fifth	40	36
Sixth	31	33
Over six	62	49
Not recorded ..	2	2
TOTAL	349	394
NUMBER OF MISCARRIAGES.		
None	296	340
One	27	32
Two	15	11
Three	4	3
Over three	4	5
Not recorded ..	7	3
TOTAL	353	394

TABLE III.

PERIOD DURING WHICH PRENATAL CARE WAS GIVEN, 1914-1915.

WEEKS BEFORE CONFINEMENT	1914	1915
1 week or less	76	48
2 to 5 weeks	90	113
5 weeks and over ..	180	227
Incomplete records ..	7	6
TOTAL	353	394

TABLE IV.

POSTNATAL CARE.

NUMBER OF CASES	1914	1915
Number of cases	335	372
LENGTH OF TIME		
Less than 1 week	17	37
1 week	58	52
More than 1 week	260	283
TOTAL	335	372
NUMBER OF VISITS		
One a day	175	222
Less than one a day	160	150
TOTAL	335	372

TABLE VI.

COMPARISON OF DEATHS UNDER ONE YEAR OF AGE, IN WARDS 1, 2, 13, 14 AND 15, BOSTON, MASS., IN 1914 AND 1915, WITH THE DEATHS UNDER ONE YEAR OF AGE AMONG THE INSTRUCTIVE DISTRICT NURSING ASSOCIATION PRENATAL CASES IN THE SAME WARDS AND SAME YEARS.

WARDS	BIRTHS	DEATHS			BIRTHS	DEATHS			BIRTHS	DEATHS				
		ALL CASES				CASES HAVING I. D. N. A. PRENATAL CARE				CASES NOT HAVING I. D. N. A. PRENATAL CARE				
		UNDER 1 YR.	UNDER 1 MO.	UNDER 1 WK.		UNDER 1 YR.	UNDER 1 MO.	UNDER 1 WK.		UNDER 1 YR.	UNDER 1 MO.	UNDER 1 WK.		
1	1914	871	89	43	29	39	3	2	1	832	86	41		
	1915	830	38	28	77	2	1	753		36	27			
2	1914	1154	111	43	24	59	4	2	2	1095	107	41		
	1915	1129	34	21	50	2	1	1079		32	20			
13	1914	661	86	27	24	124	3	0	0	537	83	27		
	1915	684	26	15	126	5	3	558		21	12			
14	1914	580	46	23	18	59	2	1	1	521	44	22		
	1915	551	20	18	69	1	1	481		19	17			
15	1914	518	57	30	27	65	1	1	0	453	56	29		
	1915	490	23	16	63	0	0	427		23	16			
TOTAL		1914	3784	389	166	122	346	13	6	4	3438	376	160	
		1915	3684	141	98	385	10	6	6	3298	131	92		

TABLE V.

DEATHS DURING FIRST YEAR OF AGE AMONG BIRTHS FROM I. D. N. A. PRENATAL CASES IN WARDS 1, 2, 13, 14, AND 15, BOSTON, MASS.

A. BIRTHS IN 1914.

LIST OF DEATHS	AGE AT DEATH	CAUSE OF DEATH	LENGTH OF PRENATAL CARE
1	15 hrs.	Premature birth	5 weeks
2	3 dys.	Congenital debility	11 " (3 mos. approx.)
3	3 "	Convulsions	2 "
4	5 "	Instrumental delivery	5 "
5	14 "	Lobar pneumonia	20 " (5 mos. approx.)
6	17 "	Infantile jaundice	4 "
7	2 mos. 4 "	Tubercular peritonitis	12 " (3 mos. approx.)
8	3 " 20 "	Lobar pneumonia	1 "
9	5 "	Peritonillar abscess	3 "
10	5 " 7 "	Broncho-pneumonia	6 "
11	6 " 9 "	Broncho-pneumonia	4 "
12	7 "	Colitis	4 "
13	10 " 5 "	Broncho-pneumonia	1 day
1	Stillbirth		2 weeks
2	"		5 "
3	"		9 "
4	"		4 "
5	"		4 "
6	"		15 " (4 mos. approx.)
7	"		3 "

B. BIRTHS IN 1915.

LIST OF DEATHS	AGE AT DEATH	CAUSE OF DEATH	LENGTH OF PRENATAL CARE
1		Craniotomy	6 weeks
2		Breech delivery	9 "
3		Uterine asphyxiation	5 "
4	2 dys.	Premature birth	1 "
5	2 "	Toxemia fol. eclampsia	1 day
6	2 "	Cerebral edema	3 weeks
7	11 "	Septic inf. newborn	6 "
8	14 "	Infantile eclampsia	7 "
9	20 "	Premature birth	1 "
10	25 "	Defective skull	12 " (3 mos.)
11	1 mo. 4 "	Broncho-pneumonia	22 " (5½ mos.)
12	4 mos. 14 "	Lobar pneumonia	5 "
13	4 " 15 "	Broncho-pneumonia	5 "
14	5 " 14 "	Broncho-pneumonia	4 "
15	6 "	Marasmus	6 "
16	6 " 4 "	Broncho-pneumonia	6 "
17	6 " 7 "	Inf. diarrhea	11 " (3 mos. approx.)
18	6 " 8 "	Pneumonia	7 "
19	10 "	Tubercular meningitis	1 "
20	11 " 18 "	Laryngeal diphtheria	1 day
1	Stillbirth		3 weeks
2	"		9 "
3	"		1 week
4	"		1 "
5	"		2 weeks
6	"		4 "
7	"		6 "
8	Miscarriage		11 "

STUDIES OF THE STOMACH IN SYPHILIS.*

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THE wide use of serum tests in the last five or six years has permitted us to discover a greatly increased number of persons with syphilis, some of whom have prominent symptoms referable to the stomach, or actual stomach lesions.

In such a group of cases we have studied the functions of the stomach, the coincidence of syphilis with other diseases of the stomach, its relation to peptic ulcer, and the symptomatology.

Material.—In a group of 600 cases of syphilis with strongly positive Wassermann reaction (largely patients at the Boston City Hospital) with the addition of a small number of private patients) were found 44 with prominent stomach symptoms, after excluding patients with hepatic cirrhosis, gumma of liver, nephritis and tubercles.

In 35 cases no definite lesion of the stomach was proved, in 9 actual syphilitic or coincident lesions were found (ulcer, gumma or cancer).

It is often impossible to distinguish between syphilitic and coincident stomach lesions during life. Two cases were proved cancer at autopsy, five had ulcer, syphilitic or coincident, two had syphilitic induration or gumma.

In the first group with no proved lesion of the stomach, there were no characteristic symptoms. The most common were epigastric distress, burning or pain, occasionally relieved by food or alkalis; vomiting, anorexia, loss of weight, usually moderate. The symptoms were as often intermittent as persistent, and the course not steadily progressive. No attempt was made to classify the cases by variations in the history.

The gastric secretion after the Ewald breakfast was within normal limits; in 23 cases (65%) hyperacid in 5 cases (15%); and subacid in 5 cases (15%); while 2 cases (5%) showed no free HCl. Only one case showed 12-hour food residue. There was no blood in stomach contents or feces with the Benzidin test. These changes in gastric secretion are not distinctive and are much like those in any functional or toxic group of cases of the same age and sex in which digestive symptoms are common, for example, neurasthenia, or tuberculosis.

There may have been a chronic gastric catarrh in some of the cases but with no positive signs. Since the free use of the Wassermann test many cases with digestive symptoms and positive serum are classed as syphilis of the stomach, probably without reason.

In the group of nine cases with syphilis and

proved stomach lesions, the classification has been very difficult. Two cases were proved by autopsy to be cancer of the stomach, but during life it was absolutely impossible to make a positive diagnosis between syphilis and cancer by history, physical examination, lack of gastric secretion, x-ray defect or even the appearance of the stomach at operation. One was a plum-sized medullary cancer, the other a scirrhus, colloid cancer, of leather bottle type. In such doubtful cases a relatively benign course and the combination of quite good health with a large stomach lesion (often shown best by the x-ray) always suggests syphilis.

Occasionally at operation the appearance of a hard, well-defined plaque-like lesion, or a dense, nodular tumor arising from a diffusely infiltrated stomach wall, together with the serum reaction, may strongly suggest syphilis.

The diagnosis of syphilis of the stomach has not been and will not be absolute as a rule. Few autopsies occur. The surgeon tends to avoid operation and especially the resection of tumors in patients with strong positive Wassermann reaction, and finally, the diagnosis usually cannot be made at operation. No doubt a considerable number of syphilitic stomach tumors have been treated surgically in the past without recognizing their syphilitic nature.

The remainder of the cases with definite lesion in the stomach fall into two groups, according to the character of the lesion found.

Class A chronic ulcer type and Class B chronic indurative or gummatous type.

There were five cases in Class A, with chronic ulcers involving the pylorus, antrum or lesser curvature of the stomach, and one median ulcer with adhesions causing an hour-glass deformity. In one case there were three ulcers. There was obstruction of the pylorus in three cases and gastro-enterostomy was performed in these, also in the hour-glass stomach.

In Class B were two cases, one with leather bottle induration of the whole stomach, one with gumma in the antrum the size of a large plum; the pylorus was not obstructed in either.

Taking these two groups of seven patients together, the ages were 23 to 63 and averaged 44 years. The patients were all in the tertiary stage. The digestive disturbance appeared from 8 to 24 years after the initial lesion, in the 5 cases where this was determined. Six cases had had some antispecific treatment but in only one had it been thorough. The Wasserman was triple positive in all. The duration of all gastric symptoms averaged five years, and of the present gastric disturbance eight months.

The symptoms consisted of distress, pain or soreness in the epigastrium with irregular vomiting, often distress on the empty stomach, relieved by food or alkalis, resembling much the irregular course of recurrent gastric ulcer; later the distress or pain was more constant.

In the five ulcer type cases the free HCl aver-

* Read by title at the 81st annual meeting of the Association of American Physicians, Washington, D. C., May 9, 1916.

aged 25 with minimum of 8 and maximum of 40; the total acid averaged 46 with minimum of 15 and maximum of 70; 4 cases showed 12-hour retention of food.

The other 2 cases (Class B) showed no free HCl in the gastric contents and a total acidity of 14 and 16. There was no 12-hour food retention.

Occult blood was found by the Benzidin test in stomach contents and stools in two cases. The x-ray was very valuable in giving the shape, size and position of the lesions. The contour in Class A was exactly that of chronic peptic ulcer with its complications (obstruction, hour glass) and in Class B of cancer, of the cirrhus or medullary type.

Frequency and Relation to Peptic Ulcer.—It is very difficult to judge the frequency of syphilis of the stomach. Some regard every dyspepsia in a syphilitic as a sign of syphilitic gastritis. It seems far more likely that these dyspeptic symptoms do not arise from *gastric lesions* but accompany the primary disease, as dyspepsia in tuberculosis is not due to any form of tubercular lesion of the stomach but to the toxemia.

Actual syphilis of the stomach is evidently one of the rarest types of syphilis. It is certainly striking that in a large hospital like the Boston City Hospital, admitting daily to its wards one or two patients with a triple positive Wassermann reaction, so very few are found to have any organic lesion of the stomach, including possible coincident lesions. This agrees with the autopsy figures of Chiari and the later figures of Symmers, who found in 314 autopsies in syphilis only one genuine syphilitic ulcer of the stomach.

Syphilis was formerly looked upon as an important cause of chronic gastric ulcer. Lang and Neumann judged about 20% of gastric ulcer syphilitic, and Engel about 10%. This is disproved by serum tests. Syphilis is a rare cause of ulcer. In less than one-half of one per cent. of 179 private cases of proved peptic ulcer was the Wassermann positive, and in less than two per cent. of 204 hospital cases. It must be remembered that this figure for peptic ulcer in hospital patients is distinctly less than the per cent. of syphilis in the total hospital cases, which is, at least, four or five. Smithies found a positive Wassermann reaction in 1-3 of 1% of a series of proved ulcer cases.

It has been impossible to decide whether the cases of chronic ulcer type (Class A) had a syphilitic or coincident ulcer of the stomach. This is true of some of the cases recently reported by Downes and LeWald. No spirochetes were found in glands and stomach tissue resected in two of our cases.

Chronic ulcer and syphilis are both common; they may be coincident without relation in at least a portion of the few cases found. An ordinary peptic ulcer may occur in syphilis with

the same frequency at least as in other persons. An ulcer in a syphilitic may improve under treatment without proving it a syphilitic ulcer.

On the other hand the recent work of Warthin and others suggest that in the active stages of syphilis there is a spirochetosis of all the viscera, and that every syphilitic has patches of fibrosis scattered through the tissues, as has been proved in the heart, aorta, pancreas, etc. The stomach may be involved in such a process and fine syphilitic lesions be later proved more frequent than they appear now.

Symptoms.—There are no characteristic symptoms of syphilis of the stomach, as is seen in the summary given in these cases. There is usually a long history of intermittent symptoms later becoming more constant. They sometimes resemble those of chronic catarrh, or ulcer, or growth, with or without obstruction of the pylorus. Pain is common; gross hemorrhage is infrequent, possibly because of obliterative endarteritis. It is useless to try to classify cases strictly on the basis of symptoms. There is usually much longer duration of symptoms and less cachexia and loss of weight in proportion to the size of tumor than in cancer. They behave like benign not malignant lesions. It is a disease of middle life; the age is below the average for cancer.

It is evident that stomach symptoms in tertiary syphilis are rarely the expression of a gumma or ulcer. Brugsch and Schneider suggest that they may be largely due to the irritation of spinal nerve roots similar to the crises of tabes but more latent. Changes in the abdominal aorta may give local pain and tenderness.

Signs.—In the cases without organic lesion of the stomach the gastric secretion has proved normal in the majority and below normal or absent in 20%. This is quite different from Neugebauer's figure in the secondary stage of syphilis, namely, 62% subacidity and 18% achylia.

Brugsch and Schneider have stated that an ulcer in tertiary syphilis is usually associated with subacidity or achylia. On the contrary we found normal or increased secretion in little more than half our cases of ulcer type, perhaps, because the majority had pyloric obstruction. Our data agree with those of Smithies in a larger series. The two cases of indurative gumma type (Class B) had no free HCl. In reporting secretion we must always take account of stenosis and the age of the patient. In obstructive cases the food is long retained and the added stimulus gives normal or increased secretion. In others the stomach empties so fast after the test meal that there is little chance for the stimulus of food to develop HCl. The reduced acidity is probably not mechanical alone, a systemic disease like syphilis influences gastric chemistry in more than local ways.

Occult blood was found in gastric contents

or stools in two cases. Palpable tumor was found in one case only.

Diagnosis.—The literature is large and indefinite and case reports before 1910, not including the Wassermann test and the x-ray, have minor value. In the older cases the diagnosis was often accidental and made only at autopsy or operation, or as the result of a random therapeutic test.

The difficulties of diagnosis have been sufficiently emphasized between syphilitic lesions and peptic ulcer or cancer. We cannot depend on symptoms, on changes in secretion, on the contour or site of the lesion, or its appearance at operation. Ulcer is an anatomical not an etiological diagnosis. The combination of ulcer signs and anacidity does not favor syphilis more than it does cancer.

Even the relief of symptoms by treatment is not a sure guide in diagnosis, though, if plaques, large indurated areas, hour-glass deformity, tumors, easily demonstrated by x-ray or operation on a patient with positive Wassermann have previously resisted treatment and fade away under antisiphilitic drugs, we have valuable evidence that the lesion was specific. While the clinical picture does not differ from other lesions, the results of treatment usually do. In doubtful abdominal cases think of syphilis.

The x-ray has proved of great value in locating the lesions exactly and following their changes under treatment accurately. We no longer need depend on the palpation of a rare tumor and its disappearance under the finger.

Prognosis. Results of Treatment.—The prognosis is about that of syphilis in general. The results of treatment are usually prompt and striking; the majority improve, even cases with severe complications like stenosis, perforation and hemorrhage. A good portion are cured, but a small group do badly in spite of thorough treatment. Gummata and induration melt away, but scar tissue does not dissolve and some deformity usually persists in the cases with gastric lesions. Gastric secretion may remain absent after symptoms have disappeared.

In the 37 cases without definite stomach lesion 16 (43%) are well; 18 (48%) improved and 3 (9%) no better.

In our 7 cases with stomach lesions (omitting the 2 cancer cases) 3 (43%) are well, and 4 (57%) greatly improved. In this group there were gains in weight of 15 to 52 pounds, with an average gain of 31 pounds.

The prognosis was called "extremely good" in summaries of older reported cases. This may be due to the use of the therapeutic test in diagnosis, since only cases which improved rapidly were considered syphilis. Some caution must be used in prognosis, since in spite of the remarkable results in individual cases less than

one-half the patients were wholly freed from dyspeptic symptoms.

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RESULTS OBTAINED BY THE CLASS METHOD OF HOME TREATMENT IN PULMONARY TUBERCULOSIS DURING A PERIOD OF TEN YEARS.*

BY JOSEPH H. PRATT, M.D., BOSTON.

NINE years ago I presented before this Association a report of the work of the first tuberculosis class. In that paper, and in others which I have published, a full description is given of the methods employed.

The Emmanuel Church Tuberculosis Class was organized July 1, 1905. Its object was the sanatorium treatment of consumptives in their own homes. From the outset insistence was placed upon rest in the open air. The patients were provided with facilities for taking the out-of-door treatment. They lived on porches or in tents or shacks erected sometimes on roofs and sometimes on the ground. When the condition of the patients permitted they came to the class meetings which were held weekly. As time passed more and more insistence was placed upon absolute rest in the active stage of the disease even in non-febrile patients. The patients kept their own records of temperature and pulse, entered in record books details of their daily life, such as the hours out of doors, symptoms, and the amount of exercise, when exercise was allowed. The home visiting was done entirely by the class nurse. Patients in all stages of the disease were admitted. No one was refused who promised to follow instructions faithfully, but strict obedience to the rules and regulations was required.

During the first ten years 206 patients were treated as regular members. This number included all those who attended at least three meetings and followed the treatment for a month. Eleven are excluded from the list because they attended only one or two meetings. Three were examined and would have been admitted if they had not refused to follow the required treatment. Four patients were so ill when they sought admission that they were never able to attend a meeting. These were

* Read at the Twelfth Annual Meeting of the National Association for the Study and Prevention of Tuberculosis, Washington, D. C., May 12, 1916.

instructed at home in the rest treatment and were cared for until their death. Two were referred to other organizations after having been less than three weeks in the class. Six were admitted to the class with the diagnosis of pulmonary tuberculosis, but on further study, were found to be suffering from other diseases.

From July, 1906, to July, 1914, 189 patients were admitted. The later careers of all but two of these have been traced. The condition of those living on July 1, 1915, was as follows: Well and working, 104; living, but unable to work, 14. There have been 69 deaths. Twenty-nine of these deaths occurred while the patients were members of the class. Fifty-six per cent, of all those admitted to the class in the nine years were restored to health. The majority of these were beyond the incipient stage of the disease when they sought treatment in the class.

When patients are treated in their homes it is possible to keep them much longer under supervision than when they are treated in a sanatorium. All of the patients who remained in the class until their health had improved to such an extent that in my opinion the activity of the disease was arrested, and they were able to return to work, were graduated from the class. The results in this group of cases are especially interesting. Up to July 1, 1915, there had been 87 of these graduates. The careers of all but one of these have been traced.

DATE OF GRADUATION	No. OF GRADUATES	DATE OF LAST REPORT	WELL AND WORKING	NOT TRACED	PER CENT. WELL.	YEARS SINCE GRADUATION
1906	9	1915	5		56	9
1907	9	1915	7	1	78	8
1908	13	1915	12		92	7
1909	16	1915	13		81	6
1910	11	1915	10		91	5
1911	7	1915	6		86	4
1912	10	1915	9		90	3
1913	5	1915	5		100	2
1914	7	1915	7		100	1
	87		74			

81% of those who graduated between 1906 and 1911, inclusive, were well and working July 1, 1915.

85% of those who graduated between 1906 and 1914, inclusive, were well and working July 1, 1915.

It is interesting to note that eight of the nine graduates in 1906 had tubercle bacilli demonstrated in the sputum while under treatment. The one patient with a negative sputum died of consumption. Two of the four deaths were due to acute lobar pneumonia, and they occurred in men who had been free from symptoms of pulmonary tuberculosis for a long time.

Out of 106 patients in whom tubercle bacilli were found in the sputum 55 are living and 49 are dead. In the histories of 52 patients, there

is no record of the sputum examination. Of these 35 are living and 16 dead. In 53 patients, all the sputum examinations were negative. Of these 47 are living and 5 dead.

We have traced 69 of the 72 former members who left the class for different reasons. Eight withdrew from the class against advice and returned to work, because they considered themselves sufficiently recovered to do so. Their after careers proved they were right. Five reported well on July 1, 1915, 2 living but not well, 1 not traced. Eleven moved away from Boston, usually to the country; 3 are well, 1 living, 7 died. Fifteen were dismissed for disobedience of the rules; 6 are well, 1 living, 8 died. Two were dismissed for drunkenness; both died. Eighteen dropped out of the class voluntarily; 7 are well, 4 living, 7 died. Two were transferred to hospitals; 1 died, 1 untraced. Eight left the class to enter sanatoriums; 1 is well, 4 living, 3 died. Two were transferred to another tuberculosis class; both died. Three moved to Colorado, California and New Mexico; 1 well, 2 died. One left the class owing to a complicating disease, arthritis deformans, and died several years later.

I wish to emphasize the importance of prolonged rest out of doors in obtaining the excellent results recorded in this report. During the first two years I allowed my patients to take graduated exercise in the form of walking as soon as they were free from fever, if the pulse was slow and the weight was increasing. Since then I have prolonged the rest treatment and have not allowed exercise until I considered the activity of the disease had been definitely checked. The patients were often kept at rest for months, but I allowed them if they had no fever to go to the lavatory, and usually permitted them to take their meals at the table. During the early years reclining chairs were largely used, but later the rest treatment was chiefly carried out with the patient in bed.

A comparison of the results obtained by the two methods of treatment shows that the strict rest treatment yields the better results.

I have taken the first thirty cases in which the exact date that exercise was begun was recorded on the records, and analyzed the group. This includes the patients admitted from July, 1905, up to November, 1906. The average time that exercise was begun, taking the mathematical mean, was seven weeks. The mean duration of treatment was 7 1-2 months. In 17, or 56% of the cases, the disease was apparently arrested. Eleven, or 36%, were well and working on July 1, 1915. In this group 58% of the cases with positive sputum recovered; 37% of these were well July 1, 1915.

In the second group of 30 cases admitted between July, 1908, and March, 1911, the average time (mean) at which exercise was begun was 4 months, and the duration of treatment 8 1-2 months. In 23, or 76 1-2%, the

disease was apparently arrested. Twenty-two were living July 1, 1915, and 20, or 66 2-3%, were working and considered themselves well. The disease was arrested in 63 1-2% of the patients with positive sputum.

TABLE II.

EFFECT OF PROLONGED REST ON RECOVERY IN PULMONARY TUBERCULOSIS.

318 CASES	EXERCISE	DURATION OF TREATMENT	DISEASE ABSTINENT	DISEASE RESTED IN PULMONARY TUBERCULOSIS		% WELL JULY 1, 1915.
				%	%	
GROUP I 1905-1906	7 wks.	7½ mos.	56	36	58	
GROUP II 1908-1911	4 mos.	8½ mos.	76½	66½	63½	

The cases in the two groups have been analyzed according to the stage of the disease on admission to the class. In order to remove the personal equation, Dr. P. Challis Bartlett, who for three years was superintendent of the Rutland State Sanatorium, has kindly gone over the records, and the arrangement of the cases in the various stages is not my classification but that of Dr. Bartlett.

TABLE III.

GROUP I. (ADMITTED 1905-1906).

	JULY, 1915		
	WELL	LIVING	DEAD
1st stage	5	4	1
2d "	13	7	6
3d "	12	3	8

GROUP II (ADMITTED 1908-1911).

	JULY, 1915		
	WELL	LIVING	DEAD
1st stage	11	11	0
2d "	13	6	2
3d "	6	2	4

We are now able to compare the after-results obtained by our plan of home treatment for poor patients with those obtained by the sanatorium treatment. In two leading English sanatoria for well-to-do patients, 52% of the patients discharged were well or alive 4 to 8 years afterwards (Bardwell). Among a large series of patients treated in the Massachusetts state sanatoria Miss Farmer found that 24% were leading normal lives 4 to 7 years after their discharge. Of our 88 patients who left the class 4 to 8 years ago 60% are well and working, and 66% are alive.

The expenses of the class have been borne by the Emmanuel Church of Boston, which has given me during the ten years the services of a nurse, and has provided some money for aiding patients with scanty means to lead the outdoor life. The total expense has been about \$16,500. I have been helped by half a dozen assistants, but I am the only one who was connected with the class in the beginning that is still attached to it.

Our results, I am sure, would be better if I had been able to give more time to the treatment and especially the after-care of the patients. I am not a specialist in tuberculosis, and this has been simply a part of my work in internal medicine. I have never visited the patients in their homes. I have seen them only in the class meetings and at the time the physical examinations were made.

In closing, I wish to make a few statements in regard to the financial returns. The ex-patients during the year ending July 1, 1915, earned, according to carefully collected statistics, \$50,000. The total earnings of the ex-patients since leaving the class amount to about \$250,000. The first two graduates have earned between them \$18,000, which is more than the entire expense of the class during the period of ten years.

THE CORRELATION BETWEEN THE SYSTOLIC BLOOD PRESSURE AND REFLEX VASOCONSTRICTION OF THE SKIN (ANEMIC DERMOGRAPHY.).

BY EDWARD A. TRACY, M.D., BOSTON.

REFLEX VASOCONSTRICTION of the blood vessels of the skin,—anemic dermography, as it is termed in the German literature,—and which is observed as a reflex to the irritation of stroking the skin, I have found to be the second component of the normal reaction to stroking the skin, the first component being a brief lasting vasodilation. A paper describing the normal reaction and giving its causation (based upon experiment and reasoning) has appeared in this JOURNAL (August 11, 1916). In that paper it was shown that reflex vasoconstriction is caused by the action of nerve stimuli coming over the sympathetic fibrils, together with adrenin in the blood stream.

This paper is based upon a study of 125 cases. The systolic blood pressure is noted in each case, together with the reflex vasoconstriction valuation taken at the same time. The cases are divided into three series: the first consisting of cases in which the blood pressure was under 125; the second consisting of cases in which the blood pressure was between 125 and 135; the third consisting of cases in which the blood pressure was above 135.

SERIES I.

CASES OF BLOOD PRESSURE UNDER 125, TOGETHER WITH REFLEX VASOCONSTRICTION VALUATION OBSERVED AT THE SAME TIME.

	BLOOD PRESSURE	REFLEX VASO-CONSTRICTIVE VALUE
Case 1.	124	5 min. 40 sec.
" 3.	124	5 " 15 "
" 5.	114	2 " 15 "
" 7.	114	2 " 25 "

	BLOOD PRESSURE	REFLEX VASO- CONSTRIC- TIVE VALUE
Case 8.	114	2 min. 40 sec.
" 9.	120	6+ min.
" 10.	114	2 min. 20 sec.
" 11.	120	4 " 5 "
" 12.	110	6 "
" 13.	110	3 "
" 15.	112	4 "
" 16.	112	3 "
" 18.	110	2 " 30 "
" 19.	120	4 " 45 "
" 21.	120	3 " 30 "
" 23.	122	5 "
" 24.	124	2 min. 20 sec.
" 25.	114	2 " 15 "
" 26.	118	1 " 45 "
" 27.	120	2 "
" 29.	106	1 min. 25 sec.
" 31.	110	2 " 20 "
" 32.	106	50 "
" 34.	124	3 "
" 35.	122	3+ min.
" 36.	110	3 min. 40 sec.
" 37.	110	6+ min.
" 38.	120	2 min. 15 sec.
" 39.	118	3 "
" 40.	110	3 "
" 41.	120	4 min. 5 sec.
" 42.	110	6 "
" 43.	114	3 "
" 44.	120	3 min. 30 sec.
" 45.	100	1 "
" 46.	110	3 "
" 47.	114	2 min. 40 sec.
" 48.	110	7 "
" 50.	120	2 "
" 51.	118	3 "
" 52.	120	2 min. 35 sec.
" 53.	110	7 "
" 54.	114	9 min. 20 sec.
" 55.	110	3 " 30 "
" 56.	110	4 " 30 "
" 57.	110	2 " 30 "
" 58.	124	3 " 20 "
" 60.	120	2 " 50 "
" 61.	104	4 "
" 63.	112	2 "
" 64.	120	3 min. 30 sec.
" 65.	122	2 " 15 "
" 66.	124	4 "
" 67.	106	3 min. 30 sec.
" 68.	114	1 " 45 "
" 70.	124	2 " 30 "
" 72.	110	6+ min.
" 73.	110	9 min.
" 74.	116	5 "
" 76.	116	3 "
" 77.	90	6 "
" 78.	114	2 min. 30 sec.
" 80.	122	3 " 30 "
" 81.	114	3 " 30 "
" 82.	100	2 " 50 "
" 83.	110	5 "
" 84.	112	3 "
" 85.	122	9 "
" 86.	112	2 min. 35 sec.
" 87.	124	3 " 15 "
" 88.	110	1 " 20 "

SERIES II.
CASES OF BLOOD PRESSURE BETWEEN 125 AND 135,
TOGETHER WITH REFLEX VASOCONSTRICION VALUATION
OBSERVED AT THE SAME TIME.

	BLOOD PRESSURE	REFLEX VASO- CONSTRIC- TIVE VALUE
Case 2.	128	6 min. 36 sec.
" 4.	128	5 " 15 "
" 22.	130	6+ min.
" 28.	130	5 min.
" 33.	128	4 min. 35 sec.
" 59.	126	5 "
" 62.	128	4 min. 30 sec.
" 69.	128	4+ min.
" 71.	128	5 min.
" 75.	130	6+ min.
" 79.	130	5+ "
" 101.	130	6+ "
" 108.	134	9 min.
" 116.	130	5 "

SERIES III.
CASES OF BLOOD PRESSURE ABOVE 135, TOGETHER WITH
REFLEX VASOCONSTRICION VALUATION OBSERVED
AT THE SAME TIME.

	BLOOD PRESSURE	REFLEX VASO- CONSTRIC- TIVE VALUE
Case 94.	140	6 min.
" 95.	138	9 "
" 96.	138	6+ min.
" 97.	140	6 min. 15 sec.
" 98.	140	5 " 30 "
" 105.	136	6 " 30 "
" 111.	140	7 "
" 112.	140	6+ min.
" 113.	138	7+ "
" 117.	140	4+ "
" 118.	140	4+ "
" 120.	140	10 min.
" 121.	140	9+ min.
" 123.	160	10+ "
" 125.	170	10+ "
" 109.	152	5 min. 35 sec.
" 110.	154	6+ min.
" 104.	180	9+ min.
" 115.	170	10+ "
" 109.	148	5 min. 30 sec.
" 100.	160	10+ min.
" 102.	160	10+ "
" 104.	160	8+ "
" 106.	150	6 min.

An analysis of this series of cases discloses the fact that we can make two correlations based on the observations recorded. These correlations are: 1. Low reflex vasoconstriction valuation is accompanied by or correlated with low blood pressure. 2. High blood pressure is accompanied by or correlated with high reflex vasoconstriction valuation.

These correlations are highly suggestive when we recall that German clinicians correlate hypertonicity with hyperplasia of the chromaffin tissue (which secretes adrenin), and that Addison's disease, caused by hypo-function of the adrenals, is associated with low blood pressure. The question at once arises is there any relation between reflex vasoconstriction and the adrenin content in the blood? Experiment and reasoning lead me to believe that the relation between them may be expressed briefly thus: *reflex vasoconstriction—anemic dermography—measures the adrenin content in the blood stream.* The basis for this correlation will be the subject-matter of a future paper.

REPORT OF A DIETARY STUDY OF ST. PAUL'S SCHOOL, CONCORD, NEW HAMPSHIRE.*

BY FRANK C. GEPAHRT, PH.D., NEW YORK.

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At the request of the Rev. Samuel S. Drury, rector of St. Paul's School, at Concord, New Hampshire, Mrs. Gephart and I made a visit to this institution during the latter part of October, 1915. The purpose of this visit was to make a study and investigation of the food supply of the institution. We were given a free hand to conduct the investigation in any manner we saw fit.

The school is located approximately one and a half miles west of the city of Concord, and has an attendance of about 350 boys. The usual entrance age is fourteen years; that of graduation, eighteen years. The school, as a whole, is made up of three distinct parts, the Lower School, the "School" and the Upper School. Each boy entering the Lower School passes to his graduation successively through the Lower, the School, and the Upper School.

Upon our arrival, and after making a superficial inspection of the institution, we decided that, in order to make a thorough, valuable investigation it would be necessary to conduct three different types of survey, namely, a sanitary survey, a food value survey, and what we term a "general" survey.

The sanitary survey comprised a rigid inspection of everything regarding the sanitation of the institution, especially in regard to the food supply, and included an inspection of the food supply storeroom, the dairy, the kitchens and dining halls, the infirmary, the water supply, etc.

The general survey included a close study of the daily menus, with a view to correcting any irregularities in this connection, as well as to correct faults in individual dishes, to adjust such matters as too much salt, too little sugar, etc., and, lastly, to improve the palatability of the food in cases where this could be done. We conversed freely with the boys themselves regarding the food, and gave weight to their own likes and dislikes.

The results of the two described surveys are of local interest only, and, inasmuch as we found very few recommendations to make that could improve the sanitation, we wish to report here only the results and the methods of the food value survey.

As stated above, the institution is made up of three school groups and an infirmary. As a result of this we found four separate dining halls,

each of which we decided should be investigated individually. How could this be done to yield the most reliable results? The four dining halls were in daily operations, meals being served three times a day to approximately 350 boys and quite a number of attendants. Obviously, the first thought was actually to weigh and analyze the food consumed at each meal by each person. Without a staff of assistants and chemists, this plan was out of the question and, at best, could not be extended over a period of time. A much more reliable procedure would be to obtain an account of the supplies consumed at each dining hall for a given length of time, and balance against this the waste from each kitchen for the same length of time. This was the plan followed. The detailed information necessary for a successful completion of the work was arrived at in the following manner:

We found that the accounting department could supply us with detailed accounts of the weights of individual items supplied for the entire school session of 1914-1915 at each individual kitchen. With proper deductions for inventories, which were regularly made, we obtained in detail an account of all foodstuffs consumed at each dining hall. All that remained then to determine the gross supplies in energy was the chemical analysis of the individual items. An inspection of the various supplies on hand afforded us information concerning the nature of the individual items. With this information we were able to obtain analyses from such reliable sources as Atwater and Bryant, Sherman, Leach, König and others. However, in the case of numerous articles it was necessary to make chemical analyses. With the detailed information of pounds consumed and percentage composition of articles as supplied, we calculated the gross intake in pounds of protein, fat and carbohydrate for each dining hall. This gross account alone was not sufficient. We also had to learn what was actually consumed; in other words, we were obliged to follow the same course in determining the loss of energy in the various forms of waste, and when determined, this loss of energy had to be balanced against the gross intake. We found that the waste from the kitchens was made up of the following items: Waste bread,—supplied gratuitously to an orphanage situated a short distance from the school; scrap waste, bone scrap and spent fry grease, sold to the soap man; and lastly, garbage, which was sent to the piggery. We found that the accounting department could supply us with records in pounds of the various kinds of waste sold to the soap man. Samples of these items were taken and chemical analyses were made. In order to make account for the waste bread and garbage, the following plan was formulated: We weighed the waste bread in each kitchen and secured an account of the total number of meals that had been served

* The results here shown represent the average food value of meals served at this institution and is not a separate study of meals served to students alone, as may be seen from Table 20.

TABLE 7.

WASTE FOR SCHOOL YEAR FROM GARBAGE, WASTE BREAD, SPENT FRY GREASE, SCRAP WASTE, AND BONE SCRAP WASTE.

	UPPER SCHOOL POUNDS			THE SCHOOL POUNDS			LOWER SCHOOL POUNDS		
	PROTEIN	FAT	CARBO.	PROTEIN	FAT	CARBO.	PROTEIN	FAT	CARBO.
Garbage	2965.2	2284.7	2138.8	2095.2	2095.2	1130.8	1059.5	913.2	1307.5
Bread	268.9	72.5	1545.7	298.5	80.5	1715.8	181.3	48.9	1402.3
Fry Grease	2198.0	.....	.....	1562.0	.....	.....	935.0	.....	.....
Scrap Waste ..	92.8	89.0	.....	2.2	2.1	.....	9.8	9.4	.....
Bone Scrap ..	593.6	612.9	.....	537.5	555.0	.....	312.9	323.1	.....
TOTALS	3920.5	5257.1	3684.5	2933.4	4294.8	2846.6	1562.5	2329.6	2709.8

in each dining hall during the time the bread was collected. The accounting department keeps an accurate account of the number of meals served in each dining hall during each school term (the account is even itemized in days), hence we could calculate the pounds of waste bread in each kitchen for the same interval of time as we had used for the gross supplies. An analysis of the waste bread completed the chain. We weighed the garbage in the same manner; samples of the well mixed material were taken, sterilized, transported to the laboratory and the analyses made. Calculations for the school term were made in the same manner as in the case of the waste bread. These various forms of waste are all that were apparent. It might be stated that, with few exceptions, the employees, etc., all live at the institution. With all of this information, we are able to present the following tables, showing in detail the items consumed, and the resulting waste for each individual dining hall.

EXPLANATION OF TABLES.

Table 1* shows the percentage composition of the items in the supplies and the means of calculating and tabulating the same. In cases where the composition is omitted explanatory notes accompany the table.

Tables 2, 3, 4, 5 and 6 show the analyses and other detailed information concerning the various forms of waste.

TABLE 8.
BALANCES FOR SCHOOL YEAR 1914-1915.

UPPER SCHOOL.	LBS. PROTEIN	LBS. FAT	LBS. CARBO.	BALANCE
Supplies for year ..	18141.4	23214.4	52147.1	
Waste for year ..	3920.5	5257.1	3684.5	
				BALANCE
	14220.9	17957.3	48462.6	

THE SCHOOL.	LBS. PROTEIN	LBS. FAT	LBS. CARBO.	BALANCE
Supplies for year ..	16400.6	20184.7	49054.4	
Waste for year ..	2933.4	4294.8	2846.6	
				BALANCE
	13467.2	15880.9	46207.8	

LOWER SCHOOL.	LBS. PROTEIN	LBS. FAT	LBS. CARBO.	BALANCE
Supplies for year ..	10617.9	12906.6	31981.8	
Waste for year ..	1562.5	2329.6	2709.8	
				BALANCE
	9055.4	10577.0	29272.0	

* Tables 1, 2, 3, 4, 5, 6 and 15 will appear in reprints.

Table 7 shows a summary of the various forms of waste.

Table 8 shows the net balances in pounds of protein, fat and carbohydrate.

Table 9 shows the calculated average values per meal in pounds, of protein, fat and carbohydrate.

TABLE 9.
AVERAGE VALUE PER MEAL FOR SCHOOL YEAR.

UPPER SCHOOL.	Meals served	Lbs. per meal.
Meals served	132,613	
Lbs. Protein	14220.9	0.1072
Lbs. Fat	17957.3	0.1354
Lbs. Carbohydrate	48462.6	0.3654

THE SCHOOL.	Meals served	Lbs. per meal.
Meals served	119,308	
Lbs. Protein	13407.2	0.1129
Lbs. Fat	15889.9	0.1332
Lbs. Carbohydrate	46207.8	0.3873

LOWER SCHOOL.	Meals Served	Lbs. per meal.
Meals Served	80,776	
Lbs. Protein	9055.4	0.1121
Lbs. Fat	10577.0	0.1309
Lbs. Carbohydrate	29272.0	0.3624

Table 10 shows a recapitulation of the preceding tables with additional calculations in the metric system, showing the distribution of heat in the various dietary constituents, as well as the cost of the food alone and together with service.

TABLE 10.

RECAPITULATION.

PER MEAL	UPPER SCHOOL	THE SCHOOL	LOWER SCHOOL
Lbs. Protein	0.1072	0.1129	0.1121
Lbs. Fat	0.1354	0.1332	0.1309
Lbs. Carbohydrate	0.3654	0.3873	0.3624
Grams Protein	48.6	51.2	50.8
Grams Fat	61.4	60.4	59.4
Grams Carbohydrate	165.7	175.7	164.5
Calories Protein	199	210	208
Calories Fat	571	562	552
Calories Carbohydrate	680	721	674
Total Calories	1450	1493	1434
Per Cent. Calories			
from Protein	13.7	14.1	14.5
Cost (Food alone) ..	\$0.2004	0.2056	0.1919
Cost 1000 calories ..	0.1382	0.1377	0.1338
(Food alone)			
Cost Food plus Service	0.2316	0.2391	0.2245
Cost 1000 Calories	0.1597	0.1602	0.1568
(Food plus Service)			

Table 11 shows balances for the infirmary. The waste in the infirmary was calculated from a mean of the other three dining halls.

TABLE 11.

INFIRMARY.

	LBS. PROTEIN	LBS. FAT	LBS. CARBO.
Supplies for year	1817.0	2045.5	4575.3
Calculated Waste	338.5	431.6	317.5
BALANCE	1478.5	1613.9	4257.8

Table 12 shows a recapitulation of the infirmary data in a similar manner as in Table 10.

TABLE 12.

INFIRMARY—RECAPITULATION.

	MEALS SERVED 12,968	PER MEAL
Lbs. Protein	0.1205	
Lbs. Fat	0.0316	
Lbs. Carbohydrate	0.3470	
Grams Protein	54.6	
Grams Fat	59.6	
Grams Carbohydrate	157.4	
Calories Protein	224	
Calories Fat	554	
Calories Carbohydrate	645	
Total Calories	1423	
Per Cent. Calories from Protein	15.7	
Cost of Food Alone	\$0.2613	
Cost of 1000 Calories (Food alone)	0.1836	
Cost of Food plus Service	0.3290	
Cost of 1000 Calories (Food plus service)	0.2312	

Table 13 shows the percentage of the total food value of the diet supplied by the more important items. A word of explanation is here necessary. The information desired is the percentage of the calories of the dietary furnished by the various items in the dietary. In order to simplify the calculation, the following plan was used. The number of pounds of fat in the dietary was multiplied by the factor 2.27. If a unit of fat yields 9.3 calories, and a unit of protein or carbohydrate yields 4.1 calories, then a unit of fat yields 2.27 times that of either protein or carbohydrate (9.3). This reduces the fat to the same basis as the protein and carbohydrate, hence when the three are added together the resulting sum is what has been termed "iso-dynamic pounds." It should be understood that while iso-dynamic pounds of protein and carbohydrate weigh a pound apiece, an iso-dynamic pound of fat weighs only 0.440 pounds. By treating each item in the same manner and dividing this result by that of the supplies, and multiplying by 100, the result yields the percentage of the food value furnished by the individual items.

Table 14 shows the animal protein in the diet and requires no explanation except to state that the data were obtained by adding together the pounds of protein which were furnished by the various items composed of animal protein, including those of milk and milk products.

TABLE 14.

TABLE SHOWING THE ANIMAL PROTEIN IN THE FOOD.

	LBS. PROTEIN SUPPLIES	LBS. & LBS. SUPPLIES	PER CENT. MIL. PROTEIN
Upper School	18141.4	12988.4	71.6
The School	16400.6	11619.2	70.8
Lower School	10617.9	7692.6	72.4
Infirmary	1817.0	1397.2	76.9

In addition to the dining halls, as above stated, another source of food was found in the "Tuck Shop." This is a small store located on the campus and under the control of the school. At the "Tuck Shop" the boys satisfy their desire for sweets, etc., as can readily be seen from a perusal of the table, showing the supplies sold there. The food value of the supplies sold at the "Tuck Shop" was arrived at in a similar

TABLE 13.

TABLE SHOWING THE PER CENT. OF THE TOTAL FOOD VALUE OF THE FOOD SUPPLIED BY THE LARGER ITEMS.

ARTICLES	UPPER SCHOOL	THE SCHOOL	LOWER SCHOOL	INFIRMARY
	ISO-DYNAMIC POUNDS	ISO-DYNAMIC POUNDS	ISO-DYNAMIC POUNDS	ISO-DYNAMIC POUNDS
	%	%	%	%
Total Supplies	122085.2	111274.3	71897.7	11035.6
Bacon	1638.0	1.3	2002.2	1.8
Beef Loins	8641.2	7.0	7476.9	6.7
Bread and Flour	16467.2	13.4	14795.3	13.3
Butter	15291.0	12.4	12453.6	11.2
Cream	1028.7	0.8	1418.3	1.3
Eggs	2630.3	2.1	2592.3	2.3
Fowl	2185.0	1.8	2122.6	1.9
Lamb	6347.4	5.2	5853.2	5.3
Milk	17826.7	14.5	14062.5	12.6
Pork Loins	1735.9	1.4	1264.5	1.4
Potatoes	6262.6	5.1	6418.3	5.8
Sugar	14377.0	11.7	13180.0	11.9
Remaining Items	23.3	24.5	25.7	22.2
No. of Items in Dietary	181	193	172	158

TABLE 16.
"TUCK SHOP."

PER YEAR	LBS. PROTEIN	LBS. FAT	LBS. CARBO.
Supplies	1540.1	2530.7	13803.8
Lbs. per boy	4.34	7.15	38.88
Total Cost of Food	\$6394.79		
No. of Days	171		
Average Number of Boys per Day	355		
Lbs. per Boy per Day	0.0254	0.0418	0.2273
Grams per Boy per Day	11.5	19.0	103.2
Calories per Boy per Day	47	177	423
Total Calories per Boy per Day	647		
Per Cent. from Protein		7.3%	
Cost per Boy per Day	\$0.1053		
Cost of 1000 Calories	\$0.1627		

fashion as in the dining halls, and is shown in detail in Table 15, which follows, and which requires no explanation.

Table 16 shows a summary of the "Tuck Shop" supplies and several interesting calculations regarding them.

Table 17 shows calculations for the "Tuck Shop" arrived at in a similar manner as Table 13 for the dining halls, and shows the more popular items consumed.

TABLE 17.

"TUCK SHOP."

TABLE SHOWING THE PER CENT. OF THE TOTAL FOOD VALUE OF THE FOOD SUPPLIED BY THE LARGER ITEMS.

ARTICLES	ISO-DYNAMIC POUNDS	PER CENT.
Total Supplies	21109.0	
Coffee Buns	1916.8	9.1
Chocolate	3066.6	17.4
Cup Cakes	785.1	3.7
Ice Cream	867.3	4.1
Peppermints	1082.0	5.1
Sugar	2390.0	11.3
Remaining Items		49.3

No. of Items in Dietary..... 83

Table 18 shows the mean data regarding age, height and body weight of the boys in the different schools.

TABLE 18.

MEAN DATA OF AGE, HEIGHT AND BODY WEIGHT.

	AGE	HEIGHT	WEIGHT
Upper School	16 yrs. 1 mo.	5 ft. 8 in.	133.6 lbs.
		172.7 cm.	60.6 k.
The School	14 yrs. 7 mo.	5 ft. 5 in.	111.9 lbs.
		165.1 cm.	50.8 k.
Lower School	13 yrs. 6 mo.	5 ft. 2 in.	96.3 lbs.
		157.5 cm.	43.6 k.

Table 19 shows the calculated basal requirements of boys of these ages, weights and heights, as determined by Du Bois in the calorimeter at Bellevue Hospital, New York City. The basal requirement of energy is the quantity liberated by an individual at rest and before the morning breakfast. In addition to this there is shown a comparison of their basal requirements with what they actually receive.

TABLE 19.
TABLE SHOWING BASAL REQUIREMENTS

Upper School	Sq. METERS OF BODY SURFACE	BASEL CALS. PER HOUR PER Sq. METER	BASEL REQ. PER 24 HRS. CALS.	CALS. PER 24 HRS. IN FOOD	PER CENT. OF BASEL REQ.
The School	1.54	47	1737	5126	295
Lower School	1.40	49	1647	4949	300

Table 20 shows the distribution of the meals in the various dining halls to boys, masters, help, guests and nurses.

TABLE 20.

TABLE SHOWING THE PERCENTAGE DISTRIBUTION OF MEALS IN THE VARIOUS DINING ROOMS.

	BOYS	MASTERS	GUESTS	HELP
Upper School	7.4	7.8	1.6	16.2
The School	61.2	11.5	0.3	27.0
Lower School	67.5	10.3	1.0	21.2
Infirmary	51.4	23.9*	—	24.7

* Nurses.

DISCUSSION OF RESULTS.

By a study of Table 10 it is noticed that the food value per meal in the Upper School was 1450 calories; in the "School," 1493 calories; in the Lower School, 1434 calories; and from Table 12 the total calories per meal in the infirmary is found to be 1423 calories. The slightly higher value in the "School" might be due to the fact that the boys of this age were in the period of adolescence. The calculated caloric value of the food for twenty-four hours, as shown in Table 19, was approximately 5000 calories, which was about three times that of the basal requirement. This was a greater amount than that calculated for farmers or soldiers by Atwater, who allowed 3500 calories; and for blacksmiths or men engaged in hard work, for whom 4150 calories were calculated. The figures appear to be high, but inasmuch as we have no previous results for like conditions, we can only say that they are a revelation. It must be remembered that the values here presented represent the food consumed by an

assemblage of boys and adults, the distribution of meals in the three schools being about 70% to boys and the remainder to masters, guests and help. It must also be remembered that the boys have a regular allotment of time for exercise, when they indulge in such sports as football, rowing, track, hockey, baseball, tennis and golf. During 1915, for instance, 126 boys took part in rowing, making 36 visits to Long Pond. During the season 1914-15 there were 50 days during which time 284 boys played hockey. During the season 1914-15 there were 40 days during which time 242 boys played football. During this season 68 boys did track work during approximately 25 days, and 108 played baseball during the same length of time. No data were available for tennis and golf, but ample provision was made for indulgence in these sports. As above stated, no studies under like conditions have been made.

Studies have been made in orphan asylums in Baltimore by Knight, Pratt and Langworthy, and in Philadelphia by Smedley and Millner. (From Bulletin 223, Office of Experiment Stations, U. S. Department of Agriculture.)

Jaffa (Bulletin 132, Office Experiment Station, U. S. Department of Agriculture) studied the dietaries of fruitarianists. One boy of ten years was included in the study.

In these cases the ages were lower, and no doubt they were living under different conditions. The results recorded in these studies were from 1700-1800 calories per day. Of the foreign studies might be quoted first that of Voit, in 1877 (*Untersuchung der Kost*, p. 125) of an orphan asylum in Munich, the ages ranging from six to fifteen years, with an average of 1680 calories.

One might also quote the extensive study of Schröder, who investigated the Children's Home for boys at Rostock, and found the average caloric intake to be 2900 calories (*Arch. für Hyg.*, 1886, iv, 42). This investigation was conducted in 1886 upon 38 boys, ranging in age from 8 to 15 years. Schröder found in this institution that the food consisted largely of carbohydrate (*Schwarzbrod*) in greater quantities than Voit would admit to the diet of a working man while performing severe work. As might be expected, there was a deficiency in animal protein, meat being served only twice a week. The boys were required to perform the various forms of labor about the farm, and the consumption of food shows quite a contrast with

other quoted studies where the life was more or less sedentary.

Another excellent study is that of Camerer (*Zeit. f. Biol.*, 1892, xxix, 399). Camerer conducted a very elaborate study of the consumption of food by his own children, five in all, four girls and a boy. This single instance is the only case in which the age compares favorably with that of the boys at St. Paul's. In addition to the consumption of food he presents complete studies of the urine, feces, perspiration, height, weight, etc. The study concerning the boy was conducted over a period of five years. The actual observations were made on twenty-four days of each year divided into four periods of six days' duration, the periods being evenly distributed throughout the year, with an omission of the second and fourth year of the study. The food was actually weighed and analyzed and the urine collected in twenty-four hour periods and closely studied. The table presented below shows the summary of the food chart, the mean, minimum and maximum grams of protein, fat and carbohydrate in the daily food being shown.

A calculation of the mean values of the table gives the following summary:

AGE	CALORIES PER DAY		
	13-14	15 $\frac{1}{4}$ -16 $\frac{1}{4}$	17 $\frac{1}{4}$ -18 $\frac{1}{4}$
	1818	2455	2560

No data are presented concerning the activity of the boy, except that he attended school, lived at home and entered the medical staff of the military service immediately after the completion of this study.

A study of the tables shows a well balanced dietary, with 14% of the total fuel value from protein, 70% of which came from animal sources. The cost of the food per thousand calories was approximately 14 cents, that of the food, plus service, about 16 cents. The cost of the food supplied per meal was about 20 cents. Considering the exceptional quality of the food supplies, which we found to be of the highest, this certainly speaks well for the purchasing department. In addition to the regular quantitative analyses, a number of examinations for adulterations were made on articles most likely to be adulterated, with negative results in all cases. It may be stated that an expert buyer made regular trips to Boston, where he purchased on the open market. A study of Table

DATE	AGE	PROTEIN			FAT			CARBO.			ALCOHOL
		MEAN	MIN.	MAX.	MEAN	MIN.	MAX.	MEAN	MIN.	MAX.	
Dec. 1886 to Dec. 1887	13-14	95.9	65.4	138.6	40.5	21.3	69.0	246.7	157.4	379.7	5.2
Jan. 1889 to Jan. 1890	15 $\frac{1}{4}$ -16 $\frac{1}{4}$	102.5	75.2	134.2	72.7	35.7	133.2	286.9	150.5	405.1	26.0
Jan. 1891 to Mch. 1892	17 $\frac{1}{4}$ -18 $\frac{1}{4}$	100.0	79.6	122.7	83.5	43.4	100.4	302.1	221.4	393.1	19.2

13 shows that 12 items out of approximately 175 in the dietary furnished almost 76% of the total food value (exact figures are shown in the table). The order of nutritional magnitude of these articles is, in a general way, milk, bread and flour, butter, sugar. This is very interesting and shows that the real staff of life is the common foods. It might also be stated that the place held by milk in the dietary is to be commended. A word concerning the milk is not out of place. All milk served at the institution was obtained on the school farm, under most modern sanitary conditions, and showed a very low bacterial count. In addition to this, the milk obtained in the morning was immediately chilled and served at breakfast; that collected at night, served at supper, in this way precluding chances of contamination and bacterial growth.

Approximately 175 different articles were served per year, and a close inspection of these articles shows great variety, with large quantities of vegetables, etc., which, without doubt, are valuable not only for their food value, but also for their mineral content. This might also be said of the milk.

It will be noticed in Table 16 that the calculated calorie value of food per boy per day at the "Tuck Shop" was 647 calories, at a cost of 16 cents per thousand calories, which was approximately the same as the cost of a thousand calories for food and service at the three schools and infirmary. By inspection of Table 17, it is seen that 17% of the food value of the food in the "Tuck Shop" was derived from chocolate, approximately the same per cent, from sugar, and 9% from coffee buns; or, in other words, out of a total of 83 articles in the supplies, 6 articles furnished approximately 50% of the food value. These articles, in the order of their nutritional magnitude, are, chocolate, sugar, coffee buns, etc.

GENERAL CONCLUSIONS.

The sanitation was found to be good, with a few minor exceptions; the quality of the food supplied, exceptionally good; the quantity supplied, above our expectations; and the cost, considering the quality, low. The manner in which the food was served was found to be first class. The diet for the term was ideal, but in detail required adjustment. The facilities for treating occasional injuries and sickness were perfect. The general healthfulness of the community was good, with most ample provision for the indulgence in a variety of sports.

A series of menus was made out, based upon the recommendations of our findings. These were put into effect at the school, with the following results, quoted from a recent letter of Dr. Drury: "You will be interested to know that we have been using your menus for the entire month of May. Not a boy has expressed anything but vast satisfaction at the variety and arrangement of foods."

Clinical Department.

ADENOMYOMA OF THE RECTO-VAGINAL SEPTUM.

BY FOSTER S. KELLOGG, M.D., BOSTON.

In August, 1916, Cullen summarized the reported cases of adenomyoma of the recto-vaginal septum.¹ The cases all date from 1909 or 1910. In the same article, he reports in detail two additional cases of his own. He classifies the types of this pathological condition as follows:

"1. Small adenomyomas lying relatively free in the recto-vaginal septum.

"2. Adenomyomas adherent to the posterior surface of the cervix and at the same time to the anterior surface of the rectum.

"3. Adenomyomas gluing the cervix and rectum together and spreading out into one or both broad ligaments.

"4. Adenomyomas involving the posterior surface of the cervix, the rectum and broad ligaments and forming a dense pelvic mass which cannot be liberated."

He adds: "Of course, one type merges imperceptibly into another and a case which to-day belongs to Group 1 may in a few years belong to Group 2 or 3."

There are fifteen reported cases of adenomyoma of the recto-vaginal septum in the literature according to this authority; and they fall into the following groups:

Group I. Cullen's Case 1, Stevens' Case 1 and 5, Nadel's Case.

Group II. Lochyer's Case 2, Cullen's Case 3, Stevens' Cases 2, 3 and 4 and 6, Jessup's Cases 1 and 2.

Group III. Cullen's Case 4, Cullen and Richardson's Case 5.

Group IV. Cullen's Case 2.

I wish to report in detail a case of adenomyoma of the recto-vaginal septum, operated in August, 1916. I wish to take it up especially from the standpoint of clinical diagnosis, because at the time of seeing the case, I was ignorant of the subject, and because prior to operation, from the nature of the case, pathological examination was of no value for diagnosis; and because, as Cullen points out, it is very easy to mistake the condition in ignorance for an inoperable carcinoma and so permit a case in group 1, 2 or 3 to become hopeless in group 4. I shall, therefore, present the case to you clinically as it came to me. In passing, it may be said that if we keep the above grouping, which while arbitrary in that it represents different stages of a single process, is valuable at this early stage in the study of the subject, in that it indexes important cases; that my case represents a fifth group or rather a new group which

should be placed either between 2 and 3 or 3 and 4, because it represented a stage different from any reported, in that the tumor caused pressure necrosis, resulting in ulceration in a few spots through the posterior vaginal wall with rather free bleeding, as may be distinctly seen even in the shrunken pickled specimen which I will show you.

The problem presented itself as follows: July 26, 1916, I saw in consultation with Dr. Thomas E. Cunningham, Jr., of Cambridge, Mass., a woman 40 years old, giving the following history:

Irish-American; married 13 years. Separated from husband two years. Negative medical history; no clinical history of gonorrhea, except burning and frequency when first married. Never had any discharge. No clinical history of syphilis. Catamenia: her periods began at 15, were of 28-day type, always regular, very little pain, flowed 1½ to 2 days. Has never been pregnant.

Present history negative except for flowing. Her May period was normal, her June period was normal, stopped in two days, but five days later she began to flow and flowed until July 1, stopped from July 1 to 5, began again July 6 and flowed until today, July 26. States she is flowing today. The amount is said to have been considerable. She has been in the country on the advice of another physician, and off her feet much of the time.

Physical Examination. Color good; pulse, 80, of good quality; rather drawn expression. Dr. Cunningham states physical examination negative save for vaginal. Abdomen soft, not distended. Vaginal: free flow of blood, with some clots in vagina. Nulliparous perineum, no external or urethral evidence of past or present gonorrhreal infection; the cervix is smooth, the uterus is retroverted so that the body is not palpable with the outside hand; posterior to the cervix is a mass taken to be the fundus. This mass is not replaceable if it is fundus; but, on the other hand, it gives the finger a sensation of not being wholly fixed. Examination with the finger in rectum tends only to confirm this. Nothing further is made out. In the posterior vaginal wall behind the cervix and extending out laterally, the vaginal mucous membrane feels thickened and rugous, but not ulcerated or indurated. On inspection, this proves to look as it feels, except that it is oozing blood, and on rubbing bleeds freely. Blood, as well, is coming from the cervix, which, on inspection, is smooth and clean.

These findings were puzzling in the extreme; primary carcinoma of the vagina is very rare, and besides the appearance was not that of carcinoma in its bleeding stage. To presuppose a 3d degree retroverted uterus with fundal carcinoma ulcerating through the posterior wall of the vagina, which was considered, demanded at least a fixed uterus which I have pointed out examination did not quite give. So did a cervical carcinoma with vaginal secondary. Old pelvic inflammation with any of these conditions was considered. I state these various considerations as they came to mind, not in detail, because they will occur to anyone, but simply

to emphasize that the picture was an irregular one which suggested that carcinoma of the genital canal was not the answer.

We determined to get snippings of the tissue behind the cervix for pathological diagnosis. Accordingly the next day this was done, nothing developing except that the tissue here was very difficult of access and that free bleeding accompanied the removal of bits. Blood for a Wassermann was taken at the same time. Submitted to F. L. Burnett, M.D., for pathological examination, he reported July 27-28, 1916:

Observation: With an acetone insoluble, as well as with cholesterinized antigen, the corpuscles are completely hemolyzed. *Opinion:* The serum gives a definitely negative Wassermann reaction. Same date, the snippings "chronic inflammatory."

Bleeding continuing and having made no progress in diagnosis, the patient was sent to hospital and ether examination, curettage of cervix and uterus and several snippings from all over the surface of the roughened posterior vaginal wall made. Ether examination revealed nothing new except that the uterus and vaults were movable, but that the uterus was not replaceable. Rectal high up revealed the mass mentioned before and taken for part of the fundus. Pathological opinion on the curettings and snippings follows:

The curettings do not express an abnormal condition, while the tissue from the vagina shows merely an increase in the fibrous elements of the submucosa.

We now knew as far as we could pathologically that the patient did not have carcinoma; but it is only honest to say that in view of the persistent bleeding from the posterior cul-de-sac we were not entirely prepared to accept the pathological diagnosis as correct, suspecting that our snippings had overlooked the true lesion. Bleeding continuing from both the uterus and the posterior cul-de-sac, one week later it was determined to remove the upper vagina.

In the mean while, search through the literature had brought to light Cullen's article above mentioned and with that in hand the diagnosis was made for us.

It was determined to approach the matter wholly through the abdomen, though I had previously considered cutting a vaginal margin from below. Under gas-oxygen-ether, knowing what to look for, the diagnosis was so clear that one marvelled to have missed it before. The retroverted small uterus sat on a tumor the size of a small egg, perfectly clearly defined from it. The vagina was thoroughly scrubbed with soap and water and alcohol, the abdomen opened and the mass encroaching on the rectum readily felt. A good exposure was obtained and a hysterectomy begun, leaving the ovaries, taking the tubes. The matter was simple until the

tumor was approached; it was found to be an integral part of the cervix, the vagina and the rectum. It was determined to dissect it from the rectum and remove it with the uterus and vaginal cuff. The tumor apparently penetrated all coats of the rectum except the mucous membrane, and it was soon apparent that it would be impossible to dissect it free without opening the rectum; in addition, the rectum was accorded onto the tumor, so that perhaps four or five inches was in apposition with the one to one and a half inch tumor. In this way a very small nick, as the rectum was freed up, became a long rent. Resections of the rectum seemed inadvisable, because it was doubtful if there was enough below the tumor to sew to. Much time was wasted endeavoring to dissect it off; it was opened and repaired in three places. It is clear to me now that frank excision of a longitudinal segment of rectum should have been the procedure with clean repair, narrowing the lumen. The uterus and a vaginal cut three-quarters of an inch below the necrosed vagina were removed with the aid of Wertheim right-angle clamps, a vaginal drain inserted, the repaired rectum put back below the peritoneal flaps and these closed. Abdomen closed in layers without drainage.

The patient came off the table in shock, which persisted in considerable degree for 48 hours; she gradually improved. The vaginal drain came out of itself in 72 hours. The bowels were kept tied up for 7 days, then moved with oil above and below. The wound broke down above the fascia in the middle half on removal of the stitches. On the 8th day a recto-vaginal fistula developed, but the patient continued to pass gas and feces through the anus. There were no urinary symptoms, very little temperature, very slight distention, easily controlled by pituitrin. Patient left the hospital at the end of the fourth week in hospital, three weeks after operation. At the end of the 7th week the abdominal wound was healed and only gas came through fistula: patient up and about; at the end of the 8th week the fistula closed.

Follows the pathological report on the removed specimen:

Observation: The specimen consists of a small uterus in which there are a few small fibromata, and a portion of the vagina. In the posterior cul-de-sac the mucous membrane is somewhat roughened and reddened, and there is an indefinite firmness. In a section through the mass the tissue is a uniform pink color.

Microscopically, the tissue is composed of a thin layer of stratified epithelium, beneath which there is a mass of fibrous and smooth muscle cells. The mass is pierced here and there by glands having a regular basement membrane. The cells of the gland are generally columnar in type, in a single layer, and mitotic figures are not apparent in their nuclei. Lymphocytes are not numerous in the tissue.

Opinion: The tissue back of the posterior cul-

de-sac is infiltrated with an adeno-leiomyoma; it is not malignant.

CONCLUSIONS.

Cullen states that all patients were still menstruating; the age varied from 25 to 53.

That menstruation in excess is the most pronounced symptom; in this case the flowing was continuous.

That pain may or may not be a symptom, depending on whether pelvic nerves are gripped in the growth or pressure is exerted; there was no pain in this case.

That rectal pain, dependent on encroachment on rectum and pain on defecation may or may not be present; not present in this case.

ETIOLOGY.

That these tumors result from fetal rests of uterine mucosa or from remains of Müller's ducts.

Further information on this subject, together with bibliography and descriptive drawings is contained in Cullen's paper and the discussion that follows.

The one important fact emphasized by this case and the others is that the condition should always be in mind so that in the future these cases may not be regarded as inoperable malignant disease.

REFERENCE.

¹ Adenomyoma of the Recto-vaginal Septum. Thomas S. Cullen, M.D., Jour. A. M. A., Aug. 5, 1916.

Book Reviews.

Personal Health. By WILLIAM BRADY, M.D. Philadelphia and London: W. B. Saunders Co. 1916.

This volume, denominated in its sub-title "a doctor book for discriminating people," deals solely with personal hygiene and not with matters of sanitation and public health. It is divided into twenty-two chapters dealing with various body functions and giving in plain language practical directions to the laity for their intelligent observation and control.

In regard to some of the details of the book we cannot find ourselves in agreement with the author's preference of suspenders to belts, or his permission of a two-inch heel for women's shoes; but in the main his hygienic dogmata are sound, sensible and straightforwardly expressed. The subjects of ptosis and faulty posture might well be more elaborately considered. The book is without illustrations but has a useful appendix dealing with various domestic

remedies and procedures. On the whole, it should prove a useful and safe medical manual of hygiene to place in the hands of the public.

Latin for Pharmacists. By GEORGE HOWE, Ph.D., Professor of Latin, and JOHN GROVER BEARD, Ph.G., Assistant Professor of Pharmacy, University of North Carolina. Philadelphia: P. Blakiston's Sons & Co. 1916.

With the decline of classical education, it has become the exception, even for physicians, to have a sufficient knowledge of Latin to write prescriptions correctly. This excellent Latin grammar for pharmacists might, therefore, equally be recommended to doctors who desire that their prescriptions should be accurately expressed and understood. Like all special scientific grammars it is incomplete; but it gives such paradigms and vocabularies as are commonly necessary in medicine, with sections on syntax and prescription writing which afford sufficiently extensive instructions for this purpose. To the best of our knowledge this book is unique and should find a place and use in the education of physicians and pharmacists unless the employment of Latin in prescription writing is to be entirely abandoned.

Vaccine Therapy in General Practice. By G. H. SHERMAN, M.D. Third Edition. Detroit, Mich.: 1916.

This volume, published by the author, is intended for physicians in general practice. This third edition aims to present the accumulated experience of the past few years, and has been entirely rewritten. The chapters on treatment have been rearranged anatomically so that diseases are grouped on a regional basis. In general it may be said that though temperate in statement, the author seems unduly optimistic in his estimate of the almost universal value of bacterial vaccines.

The Medical Record Visiting List, or Physicians' Diary for 1917. Newly revised. New York: WILLIAM WOOD & Co. 1916.

This new annual edition of the Medical Record Visiting List has been revised to increase the amount of matter intended to be useful in emergencies, and to eliminate such as might better be referred to in a physician's library. The most important change is in the list of remedies and their maximum doses in both the apothecaries' and the decimal system. As indicated in this edition, these are now official in the United States of America. This convenient visiting list should continue its established utility to physicians.

Physiological Chemistry. A Text-Book and Manual for Students. By ALBERT P. MATHEWS, Ph.D. Second Edition. New York: William Wood and Company. 1916.

The second edition of this very suggestive work presents few alterations, and those which appear merely enhance the exactitude of the text rather than developing new material or extensively re-treating the old.

The work should appeal strongly to all who desire a true graduate school text, a book which not only supplies knowledge, but unfailingly instigates thought and speculation in the fields covered. Such a volume demands all the preparation medical students now possess, and should be a valuable source of condensed information to the practitioner who desires to read into the newer achievements of physiological chemistry. Particularly commendable in this line is the long chapter on the physical chemistry of protoplasm which, with the seventy-three references that follow it, makes a most excellent introduction to matter which is entering medicine with phenomenal rapidity.

The long section on laboratory methods and practical work becomes of considerable general value through the addition of references in the description of all-important experiments, but methods demand re-editing with the greatest frequency, and this section must either fall out of date very rapidly or make unfair demands for new editions. This section also adds markedly to the bulk of the text, thus diminishing space which might be given to direct chemical considerations, and it seems fair to hope that eventually we shall have the laboratory methods as another small and inexpensive volume.

A very thorough index, together with excellent diagrams and illustrations, gives well rounded value to a markedly serviceable book.

Stedman's Medical Dictionary. By THOMAS LATTHROP STEDMAN, A.M., M.D., Editor of the Medical Record. Fourth revised edition, illustrated. New York: WILLIAM WOOD & Co. 1916.

This fourth edition of a medical dictionary that has speedily established itself as a standard contains a large number of new words relating especially to Colloid Chemistry, to Heredity, Radioactivity, Dentistry, and recently discovered Tests and Reflexes. The terms of the B. N. A., are employed throughout and are everywhere indicated as such. It is to be regretted, as in previous editions that the Greek letters are not employed in the etymology of words. The volume is well illustrated and has a convenient appendix of tables. It is to be recommended as cordially as ever to physicians and students.

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MASSACHUSETTS INCOME TAX.

In last week's issue of the JOURNAL we published an editorial by Mr. Joseph E. Perry, Massachusetts Income Tax attorney, calling the attention of physicians to those aspects of the new Massachusetts Income Tax Law which will particularly affect them. We have also received from the Department of the Tax Commissioner the following summary of the Massachusetts Income Tax, which it seems advisable also to publish in this place and emphatically to direct to the notice of physicians whom it especially concerns.

"The new law leaves unchanged such parts of our present tax system as the local assessment of real estate and tangible personal property; the taxation of corporations, inheritances, polls, and the various license and similar taxes. In the future, as in the past, shares of stock in Massachusetts corporations, deposits in Massachusetts savings banks, mortgages on real estate taxed in Massachusetts will be exempt from taxation, as will be also the income derived from such property.

The new law taxes the income from certain classes of property, the net income from earnings, and the net profits from the purchase and sale of securities. It exempts from further taxation the property from which such taxed income is derived.

It differs from the Federal Income Tax in that it taxes only income from certain sources and not from all sources, and it has only flat rates instead of progressive rates which increase with the size of the taxed income. It differs also in the details of its deductions and its administration, but in adopting the calendar year as the taxable period, and in the forms of returns required and in all other ways, it follows the Federal system so far as is possible so as to cause the minimum of additional inconvenience to the taxpayer.

The new law was designed to correct certain evils which have developed in the present system. The rate of taxation is uniform throughout the State, thereby removing the chief incentive, as far as evasion of taxes is concerned, for the wealthy people to colonize in a few towns with low tax rates. The new law is to be administered by the State in a centralized manner, insuring uniformity of assessment and collection, and removing the possibility of understandings between local assessors and wealthy residents, which have usually resulted in gross undervaluations and inequality of justice. The new rates compare favorably with those of surrounding states, and should check the alarming emigration of capital from the State. The new law substitutes just and reasonable taxation in place of previous confiscation. It puts a premium on honesty instead of on deceit. It provides for compulsory returns and backs up that provision by severe penalties and by obtaining information at the source. It abandons April first as the sole test of taxable citizenship and taxability. Instead, the tax is measured by the income received during the entire calendar year next preceding, and makes taxable every person who is an inhabitant of Massachusetts at any time during the first half of the year.

Perhaps most general interest is attached to the tax of one and one-half per cent. on the excess above two thousand dollars of the net income derived from professions, employments, trade and business. The law provides in detail the method by which such net income shall be computed and requires a return to be made by each person whose gross income exceeds two thousand dollars, even though by exemptions and deductions the net may be reduced below the taxable limit. For those with dependents, the exemption may be as high as three thousand dollars.

The same rate of tax is applied to income from annuities.

A tax of three per cent. is imposed on the profits from the sale of securities, with directions for determining the amount of the profit.

A tax of six per cent. is levied on the income from bonds, shares in corporations and partnerships, money at interest and other debts due the taxpayer, with exceptions which may be stated broadly by saying that no such income is taxable which is derived from sources which heretofore have been non-taxable, except in the case of partnerships having transferable shares. Under some conditions, a small exemption may be obtained as to income from annuities and as to income taxed at the six per cent. rate.

Partnerships, minors, estates of deceased persons and, in general, all persons or organizations except corporations receiving taxable income, are taxable, and all are entitled to the provisions relating to abatements and appeals.

Chief interest centers in the requirement that returns are compulsory and must be made within the first two months of the year, *i.e.* on or before March first. In cases of persons becoming inhabitants after March first, or by reason of absence, etc., being unable to make the return, other provisions apply.

Returns may be made at the State House or to the Income Tax Assessor or Deputies in the district where the inhabitant lives. The division into districts, the names and office addresses of the Assessors and Deputies, will be announced later. Blanks for the returns will be available on application to the Tax Commissioner or any of his Deputies, or from banking institutions throughout the State.

Returns as to real estate and tangible personal property should be made to the assessors of each city or town, as heretofore, and if a taxpayer fails to make such return, he will be obliged, in addition to his state tax, to pay locally not less than he paid last year.

Tax bills will be sent out, and the tax payable October 15, 1917. The proceeds will be distributed back to the various cities and towns, and the latter are guaranteed to suffer no loss of revenue.

The new tax is expected to reach nearly five billions of property which has heretofore escaped taxation, to produce more revenue, and to be administered at a cost of less than one per cent. of the revenue produced."

needed by the country to provide an adequate corps of military sanitary experts. An examination for these positions is announced in January, and we are informed that another will be held in February in which all eligible physicians are invited to participate.

Eligibility consists in being under 32 years of age at time commissioned, physically sound, of good moral character, a graduate of a reputable medical school, with a year's hospital experience, and capable of passing a reasonable preliminary examination. Upon passing these tests the candidate is commissioned by the President of the United States a First Lieutenant in the Officers' Reserve Corps, and assigned to duty at the Army Medical School, during which his pay and allowances amount to somewhat more than \$200 a month. On graduation, if above the minimum passing mark, he receives a permanent commission.

The Surgeon General of the Army, Washington, D. C., has prepared a circular giving, in detail, the steps necessary to secure an appointment, which, we are informed, he will be glad to furnish to anyone desiring it. Local examining boards will be convened at the larger military posts and cities so as to meet the reasonable convenience of candidates and save expense.

To those who have given no thought to the matter, the first consideration naturally would be as to what such a career might promise to a man who had achieved the distinction of a diploma in medicine—for such today is a real distinction.

It certainly offers immediate permanent relief from all pecuniary anxieties, for the remuneration is adequate to meet reasonable requirements and provide a nest egg for the family. It also offers a life of contact with educated people, all of like circumstances and socially equal—in a way it is an ideal existence.

The field of service is world wide, thus giving the broadest kind of professional opportunities and experiences. Moreover, the authorities encourage professional development in every legitimate direction and, so far as practicable, supply the means of its accomplishment.

As for distinction in medicine, this largely depends upon the personal equation of the individual; but it is an interesting fact that, considering the entire profession, the proportionate number in the Medical Corps of the Army of those who have attained distinction is very high.

ENLARGEMENT OF THE ARMY MEDICAL CORPS.

As we have noted in a previous editorial, Congress has recently passed a law materially increasing the strength of the United States Army Medical Corps and there is now a considerable number of vacancies open to medical graduates and offering an immediate opportunity for an agreeable life position with liberal remuneration. Moreover, these young men are

We can only add that to men of adventurous spirit, who would make the world their field of operation, and who seek the broadening touch of people and things of all nations; who would put to the test the chance of large responsibilities and the possibility of renown,—the Medical Corps of the Army offers a great adventure. Moreover, today, it offers an opportunity to serve the country at a moment when trained and tried medical officers are greatly needed.



INCREASED COST OF JOURNAL PRODUCTION.

IN extending a cordial greeting to its readers in this first issue of the New Year, the JOURNAL feels it a duty to call their attention to the increased cost of production which contemporary conditions have caused, and whose inconvenience must be felt by all. The chief item in this increasing cost is the great rise in price of paper, which during the coming year will cost over 100% more than in 1916. Despite this fact, however, and despite other elements of increased cost of production in engraving and printing, due to the rise of price of metals, the JOURNAL will maintain its present standard of quality in paper, typography and illustration, notwithstanding the financial hardship involved. The same number of free reprints will be supplied to contributors as in the past, and additional reprints will still be furnished at cost. This cost, however, must increase proportionately with the general increased expense of production. We regret exceedingly this necessity and sincerely hope that the prospect of the return of peace conditions, which at present seems more promising than at any time for the past two years, may lead to such an economic readjustment as will make the imposition of this burden on our contributors no longer imperative.



MEDICAL NOTES.

AMERICAN CONGRESS ON INTERNAL MEDICINE.—The first scientific session of the American Congress on Internal Medicine, an organization recently chartered under the laws of the state of New York, will be held in New York city on December 28 and 29, 1916, following the meeting of the American Association for the Advancement of Science. For this meeting the novel plan has been adopted of electing, by the

officers and council of the Congress, a referee and two co-referees for the decision of mooted questions that may arise during the Congress. On this occasion Dr. Sajous of Philadelphia will be the referee, and Drs. Daland and Dernum of the same city will be co-referees. The primary purpose of the Congress is to enlist the interest and foster the work of American physicians who are devoting themselves to research and clinical investigation in the province of internal medicine. The president of the Congress is Dr. Reynold Webb Wilcox of New York. Boston members of the council are Dr. Philip Coombs Knapp and Dr. Herman F. Vickery. The forenoon session of December 28 will be devoted to the presidential address and general business; the afternoon session of that day, to a symposium on the ductless glands in cardiovascular diseases and dementia precox. The morning of December 29 will be devoted to a meeting of the council of the American College of Physicians, the afternoon to a symposium on duodenal ulcer, with leading papers by Dr. John B. Deaver of Philadelphia and Drs. Max Einhorn, G. A. Friedman, and F. B. Turek of New York. In the evening will be held a convocation of the American College of Physicians. This program is provisional, but the plan of the meeting commands the interested attention of internists and general practitioners.

FOOT AND MOUTH DISEASE.—Considerable apprehension was created throughout the United States in the latter part of November by the discovery in Kansas City of a number of suspected cases of foot and mouth disease in a herd of cattle from Nebraska. Immediate quarantine precautions were taken, not only in Missouri but in Pennsylvania, Connecticut, Rhode Island and Massachusetts, to avert, if possible, the development of another epizootic of this disease similar to that which caused such a large economic loss last year. At Chicago an absolute quarantine was declared against all cattle shipments from Kansas, Nebraska and Missouri. As a matter of fact, however, it was soon discovered that the suspicious lesions were those of simple stomatitis and not of foot and mouth disease, so that on December 1, the established quarantines were everywhere raised, and the fear of an epizootic was at an end. The prompt establishment of precautions, however, was eminently desirable and affords gratifying evidence of the vigilance of officials to avoid future spread of the infection.

PREVALENCE OF DISEASE IN THE UNITED STATES.—The weekly report of the United States Public Health Service for December 8, 1916, states that during the month of October there were reported 67 cases of smallpox, and 393 of typhoid in Kansas. During the same period, there were 70 cases of typhoid in Washington and 40 of smallpox in North Dakota.

DEFECTIVE TEETH IN NEW YORK SCHOOL CHILDREN.—Out of 330,179 school children examined in the city of New York in 1914, 194,207, or 58.8%, suffered from defective teeth. This exceeded the sum total of all the other defects noted by nearly 80,000. Defective teeth impair general health, and impede school progress. Disorders of the digestive tract, tuberculosis and various other diseases frequently are preceded by diseased conditions in the mouth. There is a direct relationship between dental development and mental development, and it is absolutely essential to good work in schools, that children's teeth be maintained in a healthy condition.

LONDON DEATH RATES IN OCTOBER.—Statistics recently published show that the total death rate of London in October, 1916, was only twelve per thousand inhabitants living. Among the several districts and boroughs, the highest rate was 16.8, in Finsbury, a crowded central slum, and the lowest was 6.7, in the precincts of the financial district.

DIVISION OF OCCUPATIONAL DISEASES.—At the last meeting of the Medical Board of the Union Hospital, Borough of the Bronx, a division of occupational diseases was established, and Dr. Frederic W. Loughran, of the staff, was designated as attending physician in charge.

HEREDITY OF CANCER. The annual meeting of the American Association of Life Insurance Presidents was held in New York City on December 15. Mr. Arthur Hunter, president of the Actuarial Society of America, presented a paper on heredity of cancer, based on a two years' study of original insurance statistics bearing on the eighty thousand annual deaths from this disease in the United States.

"There seems little to support the view that cancer is the result of contagion. Twenty thousand applications for insurance were reviewed and it was found that in 488 cases one only of the parents of the applicant was stated to have died from cancer and in four cases both parents were stated to have died of that disease. There were 122 times as many cases in which one parent had died of cancer as those in which both parents had died of that disease. There could hardly be a stronger test than the case of husband and wife.

"My first investigation consisted of cases of persons insured in six companies, both parents having died of cancer prior to date of application for insurance. Of 472 grandparents of the insured, the cause of death was given in 234 cases of which two were from cancer; the cause of death was stated in 184 of these as 'old age,' the average age at death of which was 82. In 72 of the grandparents the cause of death was not known but the age was given, the average being 62; in 155 cases neither the age nor the

cause of death was known. It is reasonable to conclude that if only two died of cancer out of 234 parents of persons who died of cancer, that disease is not hereditary.

"The possibility of heredity in cancer has generally been studied by experiments on animals. In the case of human beings there has been no previous attempt, so far as I am aware, to investigate the problem in families where there has evidently been a cancer strain, if such a thing exists. In the present investigation, one of the groups consisted of cases in which both of the parents had died from cancer; and in another of the groups, a parent, and a brother or a sister of the policyholder had died from that disease. It might be expected, therefore, that if cancer were hereditary, it would be shown very clearly in the family records of these persons, but this has not appeared.

"Men and women who are in anxiety of mind on account of the appearance of cancer in their ancestry or immediate family may dismiss such anxieties, as there is no statistical evidence at the present time that the disease of cancer is transmitted by inheritance in mankind."

EUROPEAN WAR NOTES.

WAR RELIEF FUNDS.—On December 29, 1916, the totals of the principal New England relief funds for the European War reached the following amounts:

Belgian Fund	\$212,523.02
French Wounded Fund ..	171,379.89
Armenian Fund	130,384.46
French Orphanage Fund ..	72,880.54
British Imperial Fund ..	71,769.36
Surgical Dressings Fund ..	59,372.17
Polish Fund	55,211.93
La Fayette Fund	21,494.03
French Musicians' Fund ..	976.00

BOSTON AND NEW ENGLAND.

FORSYTH INFIRMARY LECTURES.—It is announced that a series of free public lectures is to be given on Sunday afternoons at the Forsyth Dental Infirmary, Boston. The first of these was given on December 10 by Dr. Richard Grady, U. S. N., dental surgeon at the Annapolis Naval Academy, on "Opening the Doors of Dental Knowledge to the People." Other speakers in the series will be Dr. Harvey W. Wiley, of Washington, D. C., Dr. Edward C. Kirk of Philadelphia, Dr. Truman Brophy of Chicago and Dr. Rodriguez Ottolengui of New York. The public is invited.

WEEK'S DEATH RATE IN BOSTON.—During the week ending Saturday noon, December 23, 1916, the number of deaths reported was 239, against

242 for the same period last year, with a rate of 16.39 against 17.49 last year. There were 35 deaths under one year of age, against 40 last year, and 69 deaths over 60 years of age, against 76 last year.

The number of cases of principal reportable diseases were: diphtheria, 49; scarlet fever, 23; measles, 15; whooping cough, 1; typhoid fever, 3; tuberculosis, 32.

Included in the above were the following cases of non-residents: diphtheria, 10; scarlet fever, 9; typhoid, 1.

Total deaths from these diseases were: diphtheria, 5; tuberculosis, 15.

Included in the above were the following deaths of non-residents: diphtheria, 1.

NEEDS OF THE BOSTON CITY HOSPITAL.—In previous issues of the JOURNAL we have commented from time to time upon the establishment and prosecution of social service work at the Boston City Hospital. The value of this work seems unquestionable, but the obtainment of means for its continuance is often a matter of considerable difficulty. The following appeal for funds for this purpose has recently appeared in the daily press, and deserves endorsement by all physicians and others interested in the work of the hospital:

"The reading public must be aware by this time of the valuable work being done at the Boston City Hospital by the medical social workers, but they may not know that this work has been made possible so far through the generosity of a small number of persons.

"The committee in charge of the work now reluctantly appeals to the public for liberal contributions. This work has been done at the hospital for only two years, and yet in that time has cared for 2126 patients. It is estimated that many times this number need and could be permanently benefited by the oversight and direction given by the medical social workers to the patients referred to them by the hospital staff.

"In addition to the estimated increase of cases demanding the after-care of a social worker under ordinary circumstances, there is now the crying need of special service for the infantile paralysis victims; 389 cases of this much dreaded disease had been admitted to the hospital up to the first of November, about 90 per cent. of whom are under five years of age.

"The hospital is not yet equipped to carry out the long continued medical after-care required for these little patients. No one need hesitate to send a small sum. That 10x1 equals 10 is an encouraging fact, be it dimes or dollars; and one thousand times \$5 just as much as five times \$1,000 equals \$5,000.

"If one thousand readers of this appeal will send small contributions they will help a long way towards paying expenses. In fact, in the words of the old song:

"Remember that many can always help one, While one cannot always help many."

RACHEL SHERMAN THORNDIKE.
(Mrs. Paul Thorndike, Chairman.)

"All contributions sent to Mrs. George H. Monks (checks payable to Olga E. Monks, treasurer), 67 Marlboro street, Boston, Mass., will be gratefully received and expended with careful economy by the committee.

"Any one wishing to know details of the work will find them in a short report which will be sent upon receipt of a request for it, addressed to the secretary, Mrs. Herbert L. Burrell, 993 Charles River Road, Cambridge, with a 2-cent stamp enclosed."

WESTBOROUGH STATE HOSPITAL.—The thirtieth anniversary of the opening of the Westborough (Mass.) State Hospital was observed at a meeting held at that institution on December 7 under the presidency of Dr. N. Emmons Paine, first superintendent and present chairman of the board of trustees. Addresses were made by Dr. Paine, by Dr. Henry I. Klopp, superintendent of the State Hospital at Allentown, Pa., by Dr. John L. Coffin and by Dr. John C. Sutherland, dean of the Boston University Medical School.

NEEDS OF INFANTS' HOSPITAL.—The directors of the Infants' Hospital have recently made another appeal to the public for subscriptions to enable the continuance of its work during the coming year. A similar appeal a year ago raised the sum of \$13,425.50.

"The hospital is in need of about the same amount of money in order to run it to capacity during 1917. The most important instrument in saving the lives of the sick babies of the poor is a hospital devoted to that end. This is the work of the Infants' Hospital, which is the only hospital in Boston where babies alone are received in its wards. It is a charitable institution, which takes care of sick babies from everywhere, and the need in Boston for free beds for babies is greater now than it has ever been before. Frequently the hospital is so crowded that it is necessary to put the babies on the waiting list.

It is earnestly hoped that the present appeal will again make it possible to continue to save the babies for 1917. Subscriptions may be mailed to the Infants' Hospital, 55 Van Dyke street, Boston."

POLIOMYELITIS IN MASSACHUSETTS.—On December 18, the number of cases of poliomyelitis reported in Massachusetts during the month of December, reached a total of thirty-six, making 1916 cases since the beginning of January.

MASSACHUSETTS COLLEGE OF PHARMACY.—It is announced that the Massachusetts College of Pharmacy has recently received an anonymous gift of \$550,000, which is to be devoted to the

construction of its projected new building on Longwood Avenue, Boston.

HOSPITAL BEQUESTS.—The will of the late Peter P. F. DeGrand, who died in 1855, contained bequests of \$25,000 each to the Boston Lying-in Hospital, and the Boston Female Medical Education Society, these gifts to become operative upon the death of three annuitants. Petition has been made, however, to terminate the trust in whose hands the estate is lodged, by paying these and other legacies.

HARVARD MEDICAL SCHOOL FREE LECTURES.—The Faculty of Medicine of Harvard University has announced the following annual course of free public lectures to be given at the Harvard Medical School on Sundays, at 4 p. m., in 1917.

Jan. 7, Dr. Francis G. Peabody, "Alcohol and Efficiency"; Jan. 14, Dr. Hugh Cabot, "The Care of the Wounded with the British Expeditionary Force in France"; Jan. 21, Dr. E. W. Taylor, "Infantile Paralysis; Precautions Necessary and Unnecessary"; Jan. 28, Dr. W. T. Porter, "Shock in the Trenches"; Feb. 4, Dr. J. L. Morse, "Feeding and Its Relation to the Infant's Development"; Feb. 11, Dr. F. J. Cotton, "The Development of Employer's Liability Insurance in Accident and Sickness"; Feb. 18, Dr. E. H. Place, "Does It Pay to Have the Contagious Diseases During Childhood?" Feb. 25, Dr. Percy G. Stiles, "Sleep"; March 4, Dr. L. M. S. Miner, "Diseases of the Teeth and the Use of the X-ray in Their Diagnosis and Treatment"; March 11, Miss Ida M. Cannon, "Social Service in Medicine"; March 18, Dr. Cleaveland Floyd, "Tuberculosis; Its Cause and Prevention"; March 25, Dr. W. B. Cannon, "Methods of Medical Progress"; April 1, Dr. C. T. Brues, "Fleas and Other Insect Parasites in Their Relation to Public Health"; April 8, Dr. J. Baptiste Blake, "Accident and Injury"; April 15, Dr. Paul Thorndike, "Urinary Troubles in Elderly Men" (to men only); April 22, Dr. W. H. Robey, "Some Facts and Fancies About Heart Disease."

FRAMINGHAM TUBERCULOSIS INVESTIGATION.—In the issue of the JOURNAL for November 30, we commented editorially on the projected tuberculosis investigation to be undertaken at Framingham, Mass., by the National Association for the Study and Prevention of Tuberculosis. The executive officer in charge of this experiment is Dr. Donald B. Armstrong of New York. The following statement by Dr. Armstrong relative to the plans and methods of investigation to be adopted, has recently been published in the daily press.

"We desire to carry on a dignified and earnest effort in disease control and health creation. We realize that success is entirely de-

pendent upon the people of Framingham, their co-operation, their helpfulness and good will.

"With the help of the Framingham doctors, we want to try first to discover all of the dangerous cases of tuberculosis, those that may be infecting babies and school children. We want to see that these people are provided with adequate medical and nursing care.

"This is, of course, the first step and may lead doctors and nurses to other people exposed to the disease, and still only slightly infected people, who can be saved from further development of the disease by advice and encouragement and help along the lines of hygienic living, pure air, good food, rest, etc.

"Of course, only the best of acknowledged treatment methods will be suggested, the main emphasis being placed on home care, and on the protection of the non-infected, including the prevention of new cases.

"Every effort will be taken in the future to make clear the nature of the demonstration and what it really is. While somewhat illogical it may be worth while at this time to emphasize briefly what it is not.

"In the first place the demonstration is not an advertising scheme for any one, but a straightforward earnest attempt to prevent disease. Framingham was selected not because it was an unhealthy town, but because it was an average industrial community with an excellent co-operative spirit, promising success in the demonstration.

"No unusual experiments are contemplated, but only the best, authoritatively recognized methods of diagnosis and treatment will be advocated. Those interested in the demonstration can use no coercion, for they are without authority. For this reason particularly the success of the work depends on the sympathy and co-operation of Framingham people. The work will, of course, be carried out in all parts of Framingham.

"Every effort will be made to prevent Framingham from becoming a mecca for tuberculosis cases. The funds available will not be expended for new hospitals or sanatoria, or for an outside medical staff. On the contrary, as far as hospital and medical facilities are concerned, the work will be carried out on a basis of existing State and nearby institutions and through the help of the Framingham medical men.

"The work, if successful, will be of great importance not only to the tuberculous problem, but also to health work of all kinds. Framingham should realize that the eyes of the medical, health and scientific worlds are upon her.

"If, at reasonable expense, with the co-operation of everybody in the community, she can be made the healthiest spot in the United States, the town most free from contagious disease, especially tuberculosis, she will have won a world wide fame as a hygiene Utopia and will have done a world service."

MASSACHUSETTS MEDICAL SOCIETY.—The Special Committee on Workingmen's Compensation of the Massachusetts Medical Society has held several meetings and has formulated a plan by which the injured workingman can have the medical attendant of his choice without sacrificing the medical benefits of the act. The committee has been in consultation with the Standing Committee of the Society on State and National Legislation, in accordance with the terms of its appointment, and further consultation is to be held in the near future.

Massachusetts Medical Society.

SPECIAL MEETING OF THE COUNCIL.

DECEMBER 20, 1916.

HEALTH INSURANCE.

A SPECIAL meeting of the Council was held at the Boston Medical Library, Wednesday, December 20, 1916, at 11 a.m. The President, Dr. Samuel B. Woodward, was in the chair, and the following 94 councilors and several members of the standing committees on State and National Legislation and on Public Health were present:

BARNSTABLE

C. W. Milliken

BRISTOL NORTH

Sumner Coolidge

BRISTOL SOUTH

R. D. Dean

E. F. Cody

E. F. Curry

W. A. Dolan

R. W. Jackson

ESSEX NORTH

F. B. Pierce

R. V. Baketel

I. J. Clarke

G. E. Kurth

E. H. Noyes

J. J. O'Sullivan

ESSEX SOUTH

Emile Poirier

N. P. Breed

J. F. Donaldson

P. P. Johnson

W. G. Phippen

FRANKLIN

G. P. Twitchell

HAMPSHIRE

E. P. Bagg, Jr.

T. S. Bacon

G. D. Henderson

M. B. Hodskins

A. G. Rice

MIDDLESEX EAST

J. S. Hitchcock

C. J. Allen

E. C. Fish

MIDDLESEX NORTH

J. V. Meligs

J. J. Cassidy

J. H. Lambert

MIDDLESEX SOUTH

W. D. Swan

M. H. Bailey

H. T. Baldwin

S. O. Baldwin

C. H. Cook

H. F. Curtis

D. C. Dow

A. W. Dudley

G. W. Gay

C. M. Hutchinson

A. A. Jackson

S. F. McKeen

G. A. Miles

C. E. Mongan

C. E. Prior

Godfrey Ryder

F. W. Taylor

J. O. Tilton

G. W. W. Whiting

NORFOLK

T. F. Greene

J. W. Ball

E. H. Brigham

P. W. Carr

T. J. Coyne

R. W. Hastings

G. W. Kaan

Bradford Kent

Harry Linenthal

T. J. Murphy

J. A. Reilly

Victor Safford

T. M. Shee

F. W. Sleeper

R. T. Stearns

NORFOLK SOUTH

J. C. Fraser

E. N. Mayberry

PLYMOUTH

Gilman Osgood

F. G. Wheatley

SUFFOLK

G. W. W. Brewster

W. L. Burrage

David Cheever

E. A. Codman

J. A. Cogan

G. A. Craigin

E. G. Cutler

R. L. DeNormandie

Albert Ehrenfried

C. M. Green

W. A. Morrison

Abner Post

Anna G. Richardson

SUFFOLK (Cont.)

W. H. Robey, Jr.

G. C. Smith

Mary A. Smith

Peter M. Smith

Richard M. Smith

H. F. Vickery

WORCESTER

G. O. Ward

W. P. Bowers

Homer Gage

A. G. Hurd

F. H. Washburn

S. B. Woodward

WORCESTER NORTH

E. L. Fliske

The reading of the minutes of the last meeting was dispensed with by vote. The President read the call for the meeting, signed by C. E. Mongan and ten other councilors, all from the Middlesex South District Medical Society, and stated that he had received about a dozen letters asking for a special meeting from councilors of the Norfolk District Medical Society. The purpose of the meeting was to "consider the proposed Health Insurance Legislation," and he stated that no other subject would be considered except that he would entertain a motion expressing sympathy to the President of last year, Dr. C. F. Withington, in his serious illness. *Voted*, That the Secretary be instructed to write Dr. C. F. Withington that the Council expresses its heartfelt sympathy, and hopes that he will soon recover his health.

Dr. W. A. Dolan moved, and it was seconded, that the debate be unlimited, and it was so voted.

Dr. F. J. Cotton, for the special committee of the Council on Industrial Health Insurance, presented the report of his committee that had been sent to councilors with the notices of the meeting. It follows: He wished to delete these words from the middle of Section 2: "From this panel so constituted, the carriers may indicate to their insured a preference, but—" Also at the end of Section 4, insert: "but in no case shall they decide against the provisions of the earlier parts of this section." Dr. Cotton thought that his committee had done what it was asked to do by the Council, and that it should receive instructions from the Council as to further action or be discharged. On motion by Dr. Cook it was *Voted*, That the report of the Committee on Industrial Health Insurance be accepted as a report of progress and the committee continued.

WORKMEN'S SICKNESS INSURANCE, whether in the form of the Doten bill or in other guise, is largely a medical question. If a bill providing for it should be passed without more care than was evidenced in the passage of the present Accident Compensation Law in this State, it seems probable not only that medical care of the injured workman would be poor, but that the whole practice of medicine in the Common-

wealth would be disrupted; for the law seems likely to include, in its provisions, *families* as well as *actual wage-earners* within a \$1200 limit.

Our profession has a record for altruism, but to ask us to sacrifice ourselves to a plan which we are not sure of as a benefit even to our patients would be absurd!

The undersigned—a committee appointed by the Council of the Massachusetts Medical Society, in June, 1916, to look after the interests of the profession in this matter—have given a good deal of study to the question, and have tried to profit by the work previously done by others. Also, we have kept in touch with the Recess Committee of the Legislature, designated to consider this among other questions for report to the coming legislative session.

It has seemed to us timely to present to the profession a draft of provisions that represent what we may call the irreducible minimum of medical rights. In the drafts for bills, and in the bills introduced for such legislation to date, the medical side has been strangely neglected.

We understand that the proponents of the Doten bill have now in preparation changes and amendments to meet this neglect. Nevertheless, through hoping that others may protect our interests or rights, we feel it the duty of medical men to protect themselves.

The draft herewith submitted is put before the medical profession of the State for consideration and discussion. It should not be given out as representing the opinion of the profession until we have more expression of opinion.

There seems to be some divergence of view in the profession as to the value of the main principle involved. This is natural. Your committee may well be wrong in this, but we have felt that it was not within our province to pass on this very large question; we have felt that it was for us only to detail the conditions necessary, *in case such a bill should pass the Legislature*, in order that the workingman should be cared for, and cared for properly, without utterly ruining the doctor.

We believe, by the way, that ruining the doctor *would often kill or spoil the workingman*.

The draft herewith presented seems to us to represent the minimum demands we *must* make if the proposed legislation is to go through. *More unfavorable conditions must result in inferior medical service*, and so work to the defeat of the intent of such legislation.

The workingman will necessarily hesitate in his adherence to a scheme that does not take proper care of him. The doctor is far within the edge of his rights, if he wants to know where he comes in.

SECTION 1. Medical, Surgical and Nursing Attendance. All necessary medical, surgical and nursing attendance and treatment shall be

furnished by the carrier from the first day of sickness, during the continuance of sickness, but not to exceed twenty-six (26) weeks of disability in any consecutive twelve (12) months. In case the carrier is unable to furnish the benefit provided for in this section, it must pay the cost of such services actually rendered by competent persons at a rate approved by the Commission. Competent physicians and surgeons shall mean those upon the panel, as provided for in Section 2. By the rate approved by the Commission shall be meant the rate established in Section 4. By furnished (lines 3 and 6) shall be meant furnished as provided in Section 2.

SECTION 2. Medical and Surgical Service. On or before every physician and surgeon who, being legally qualified to practise in Massachusetts, shall desire to serve under this act, shall register for this purpose with the Commission, and each carrier shall be, within a reasonable time after such date, furnished by the Commission with a list of physicians and surgeons so registered. The patients shall have free choice among the physicians or surgeons upon this panel, subject to the physician's or surgeon's right to refuse service on grounds specified in regulations made under this act by the Commission, provided, however, that no physician or surgeon on the panel shall have on his list of insured patients more than 500 insured families or more than 2000 insured individuals. The Commission shall, upon presentation of satisfactory evidence that any physician or surgeon upon the panel is incompetent, neglectful of his duty, or dishonest, suspend or remove such physician or surgeon from the panel, and decision of the Commission shall be final.

SECTION 3. Appointment of Physicians and Surgeons as Referees. The Commission shall establish Districts and shall appoint a physician or surgeon as referee in each District; such referee shall be paid by the Commission a salary not to be less than \$ per annum and shall devote his entire time to the work. It shall be the duty of such referee to supervise the character of the medical and surgical service in the interest of the insured patient, the physician, the carrier and the Commission. He shall decide all disputes involving medical or surgical questions that arise between insured patients and physicians, between physicians serving upon the panel, between insured patients and carriers, or carriers and physicians, including the termination of disability. His decision may be appealed from to the medical advisory board, whose recommendation shall be given to the Commission, whose findings shall be final.

SECTION 4. Payment of Physicians and Surgeons. Physicians and surgeons, serving upon the panel, shall be paid by the carriers for med-

ical or surgical services rendered to the insured a fee per visit that shall be not less than the average minimum fee for services rendered by physicians and surgeons of the locality in similar cases. Services rendered in maternity cases shall include previous supervision, when applied for, for at least six (6) weeks previous to the delivery, and supervision for four (4) weeks after birth, included as a part of the care of childbirth.

In case of dispute between physicians and carriers as to charges for services, the Commission shall have the power to decide, and their decision shall be final, but in no case shall they decide against the provisions of the earlier parts of this section.

SECTION 5. Medical and Surgical Supplies. Insured persons shall be supplied by the carrier with all necessary medicines, surgical supplies, dressings, eye glasses, trusses, crutches and similar appliances prescribed by the physician, not to exceed in cost for any one insured person the amount of \$ in any one year.

SECTION 6. Hospital Treatment. Hospital or sanatorium treatment and maintenance shall be furnished upon the approval of the medical officer of the carrier instead of all other benefits, except as provided for in Section , with the consent of the insured member or that of his family, when it is not practicable to obtain his consent. The carrier may demand that such treatment and maintenance be accepted when required by the contagious nature of the disease, or when, in the opinion of its medical referee, such hospital treatment is imperative for the proper treatment of the disease or for the proper control of the patient. Cash benefit may be discontinued during refusal to submit to hospital treatment. Hospital treatment shall be furnished for the same period as cash benefit. This benefit may be provided in those hospitals and sanitaria with which the carriers have made satisfactory financial arrangements, provided that such hospitals are of a standard approved by the medical advisory committee. A charge of \$15.00 per week shall be considered a proper charge per patient for hospitals and sanitaria.

SECTION 7. Maternity Benefits. Maternity benefits shall consist of all necessary medical, surgical and obstetric aid, materials and appliances which shall be given insured women and wives of insured men. A weekly maternity benefit payable to insured women equal to the regular sick benefit of the insured for a period of ten (10) weeks, of which at least six (6) shall be before delivery, shall be made on condition that the beneficiary abstain from gainful employment during the period of payment.

SECTION 8. From a list of twenty (20) physicians or surgeons recommended by the Massachusetts Medical Society and the Massachusetts

Homeopathic Medical Society, each in proportion to its total membership, the Governor shall appoint a Medical Advisory Committee of five members to serve respectively five, four, three, two years and one year. Vacancies on this board from death or resignation shall be filled for the unexpired term. Each succeeding appointment, except for the filling of such vacancies, shall be for five years. The members of this Committee shall be paid only for actual expenses incurred in the performance of their duties. It shall be the duty of this Committee: (1) to advise the Commission on medical matters; (2) to standardize contracts with hospitals and dispensaries; (3) to hear and act on all disputes arising, including such as are referred to them on appeal as provided in Section 3. Their findings shall be transmitted to the Commission for approval and adoption.

It is recommended that, owing to the medical questions involved in the proposed act, the act be so drawn that there shall be medical representation upon the Commission.

F. J. COTTON,
W. H. MERRILL,
F. W. ANTHONY.

Dr. C. E. Mongan presented the following resolution and moved its adoption. Then he addressed the Council at length on "Health Insurance from a Different Standpoint." (See abstract, page 35).

TO THE SPECIAL COMMISSION ON SOCIAL INSURANCE OF THE COMMONWEALTH OF MASSACHUSETTS:

Resolved, That realizing the importance of the proposed Health Insurance Laws for Massachusetts, and appreciating the great change that would come in the social conditions of the people of the State, and appreciating further the great rôle the medical profession would play in the proper administration of such laws, and feeling that the citizens of Massachusetts should be more fully informed as to the scope and meaning of the proposed legislation, we, the Council of the Massachusetts Medical Society, assembled in meeting for the purpose of considering health insurance, most respectfully request that no definite plan on Health Insurance or recommendation in regard to health insurance, be submitted to the Legislature, until a further knowledge of the proposed laws be spread among the citizens of the Commonwealth.

Dr. Cotton made some remarks on different points raised by Dr. Mongan, especially as to the constitution of the committee on health insurance of the American Medical Association, of which he was a member. In his opinion, the Workingmen's Compensation Act should be modified before health insurance laws are placed on the statute books. He thought the Society would make a mistake in going on rec-

ord at this time against the principle of health insurance. Dr. Dolan, as a delegate from the Fall River Medical Society, offered as an amendment to Dr. Mongan's resolution: "That the counsellors of the Massachusetts Medical Society oppose any legislation on health insurance."

Dr. Anthony thought that Dr. Mongan's resolution should be passed, and was not in favor of the amendment, agreeing with Dr. Cotton as to the inadvisability of opposing health insurance legislation at this time because physicians' motives might be questioned. Dr. Dolan's amendment being seconded and put to a vote, was lost. Dr. Mongan's resolution was reread by the president, seconded and carried unanimously.

Dr. W. I. Clark, a member of the Standing Committee on Public Health, who had attended the conference on accident and social insurance at Washington, December fifth to ninth, 1916, at the instance of the President, as an unofficial representative of the Massachusetts Medical Society, reported briefly on his impressions of that conference. In his opinion, the expense of health insurance under the existing bills, would be very heavy for the State, and they make no provisions for the prevention of accidents or sickness; the conference seemed to him to be a fair one, three parties being represented. The American Association of Labor Legislation, the standard manufacturers of the United States, and organized labor. He felt sure that the United States Public Health Service is in favor of some sort of health insurance.

Dr. Mongan made a motion that the president of each District Medical Society be empowered to expend from the treasury of the Society not more than \$50 for the purpose of spreading information as to health insurance in his district. When Dr. Dolan and Dr. Green had explained that the present special committees on health insurance and Workingmen's Compensation were authorized by the vote of the Council, October 4, 1916, to expend money subject to the approval of the President and the Committee on Membership and Finance, Dr. Mongan withdrew his motion.

Adjourned at 1.05 p.m.

WALTER L. BURRAGE,
Secretary.



ABSTRACT OF REMARKS OF DR. C. E.
MONGAN ON HEALTH INSURANCE BE-
FORE THE COUNCIL OF THE MASSA-
CHUSETTS MEDICAL SOCIETY, DE-
CEMBER 20, 1916.

I SIGNED the request to the President to call this meeting, and I am going to speak in regard to health insurance, but I will speak on a phase of this question which has not been

touched upon by any of the speakers who have appeared before our Society; nor has anything been written about it. Before entering on the discussion of health insurance, I desire to offer the following resolution (See page 34).

I have some words to say in explanation of my position. Your Committee on Industrial Health Insurance had appealed in print that the profession become interested, and at the October meeting of the Middlesex South District, a committee of eight was appointed to interest and inform the medical profession as to the scope and nature of health insurance. The following committee was appointed:

Dr. Charles E. Mongan, of Somerville, Chairman.

Dr. Enos H. Bigelow of Framingham.
Dr. P. Challis Bartlett of Newton.
Dr. H. A. Wood of Waltham.
Dr. Felix McGirr of Cambridge.
Dr. John F. O'Brien of Charlestown.
Dr. Frank W. Plummer of Malden.
Dr. Frank E. Bateman of Somerville, Secretary.

Our committee quickly arrived at the conclusion that the subject of health insurance was a matter that should interest the profession of the State, and the committee appealed to the President of our Society, asking his aid for the purpose of interesting the profession at large. President Woodward most kindly offered to do all in his power to assist. The result of our combined efforts is this meeting, and I think I ought to say here that President Woodward fully appreciates the intricacies of the problem that confronts us, a problem that not only concerns the medical profession, but one of those complex social questions, the solution of which affects every man, woman and child.

Health insurance,—whence comes it; who asks for it? There is not a medical society, there is not a lay society, there is no body of organized men in Massachusetts that has asked for this legislation, no general practitioner, nor special practitioner, as far as I have been able to ascertain. But there is a society called the American Association for Labor Legislation, with headquarters at New York, which has asked for this legislation. This Association is allied to an International Association which has its headquarters in Basel, Switzerland. The international organization has sixteen foreign branches in as many foreign countries. It has nothing to do, directly or indirectly, with organized labor. The American branch is said to have an enrollment of 3000 people. In this enrollment we find professors of economics, professors of statistics, philanthropists, actuaries, statisticians and people interested in social service; very few general practitioners of medicine. This Association is the head and front of the agitation for health insurance in this country. You may understand how powerful this organization is when

I say that it will introduce health insurance bills in the legislatures of twenty states in the United States during the coming year.

In stating the subject of health insurance, we are surprised to find that the first modern attempt at health insurance was made in Russia in 1806, when the Czar issued an order requiring proprietors of mining and metallurgical industries who employ 1000 men to have hospitals and accommodations for sick or injured employees. That was the rule of the empire until 1866, when another order was issued during the cholera epidemic, compelling every industrial organization of 1000 men or more to provide a bed for every 100 people, and to have a doctor in attendance; and every factory where women were employed to have obstetrical provision. Outside of Moscow a factory employing 500 or more workmen was required to have one bed for each 100 workmen, with a resident physician. When the number of workmen exceeds 3000, two physicians must be employed, one of whom must reside at the factory. From this system has grown the great system of state medicine of Russia, which Mr. Rubinow in his book on "Standards of Health Insurance" praises very highly.

Germany adopted health insurance in 1883, Great Britain in 1912. The countries that have compulsory health insurance are Russia, Germany, Austria, Serbia, Great Britain and Ireland. In every one of these countries, with the possible exception of Great Britain, the individual is submerged. Their governments are autocratic. The countries that have voluntary health insurance are France, Switzerland, and Sweden. You will notice that in those countries the individual stands out as having some rights. He is not submerged. Does one set of countries imply collectivism, the other set imply individualism? It is well worth while to get down to the underlying principles that govern the American Association for Labor Legislation.

The adoption of health insurance will affect every man who practices medicine; will affect every one who has anything to do indirectly with the practice of medicine. It will affect hospitals, nurses, convalescent homes, and sanatoria. It is the first step in the socialization of the practice of medicine. Experts who have studied health insurance see in it the first step toward the State taking over the practice of medicine.

This subject is now called health insurance, but it was not always so called. It started out as sickness insurance, but that title, according to Mr. Rubinow's book, was found to be unsatisfactory. No one wants to be sick. Everyone wants to enjoy good health, so the name was changed from sickness to health insurance.

What does that legislation propose? In Massachusetts it proposes to insure every wage-earner who earns \$25 a week or less. It proposes that such wage-earner shall have in return

for what he pays into the insurance fund a certain amount of cash benefit, medical attendance, nursing attendance, surgical attendance, and hospital attendance. In other words, it asks the Commonwealth to divide its citizens into two great classes, those who earn \$25 a week or less, and those who earn more than \$25 a week. The proponents say that the cause of poverty is sickness and the cost of sickness, so that we may conclude that if a citizen of Massachusetts earns \$25 or less he is poor. The State must aid him. The State must help him out with his medical bills. Therefore, we have a definition of poverty according to the advocates of this measure, and that definition is to be written into the laws of the Commonwealth.

There is another association that is interested in philanthropy, working in the United States. It is called the Survey Associates. Some of the members of this association are also members of the American Association for Labor Legislation. The Survey Associates are frank and more candid than the American Association for Labor Legislation, in that they have a platform, upon which they boldly stand as advocates of the socialization of the practice of medicine.

The American Association for Labor Legislation has a social insurance committee, which is made up of actuaries, statisticians, professors of economics, and two physicians, neither one of whom has been a general practitioner of medicine, as far as I have been able to learn. Nearly every member of this committee has written books on social insurance or economics; many of them have been employed by the State or Federal authorities as investigators of industry. At a hearing before the Special Social Insurance Commission of Massachusetts at the State House, one of the over-enthusiastic office holders of the American Association for Labor Legislation said that any man, or body of men, who stood in the way of health insurance would be promptly brushed aside, so sure was he in his opinion that health insurance laws would be passed this year. I have given you these thoughts that you may understand what sort of a body it is that proposes this legislation; also I think you ought to know the attitude of some of its officials.

The proposition is practically an indictment of the medical profession of Massachusetts. They say we have not taken care of the poor, the sick poor, and now they are going to take it out of our hands, notwithstanding the fact that nobody in Massachusetts asks for such legislation. They are going to give us a cure for poverty by taking away from us the cure of the sick, and putting it in the hands of a commission appointed by the governor. It will be the most important commission that ever came to Massachusetts. It is said by the advocates of this measure that this commission will have jurisdiction over one million wage-earners in this

State. What possibilities there will be in this for a political machine in the hands of a not over-careful governor, I leave to your imagination. The supporters of this legislation practically state that we have one million poor in the state of Massachusetts, but the report of the bank commissioners tells us we are far from being a poverty-stricken community, for there are in the savings institutions of this Commonwealth, \$1,053,000,000 of savings, not savings industrially invested, but savings actually in savings banks. Yet the proponents of this legislation tell us we are poor, and a party of New York altruists make a journey over from New York to Boston to instruct us in what way we may abolish poverty.

Inferentially they say the medical profession has been lagging behind, so under this form of insurance doctors are to be organized, and the doctors so organized, under the supervision of the State, will attend the insured. Will that be introducing among the doctors "class"? Will the doctors who are called panel physicians or insurance doctors be considered on a lower level than the other choice spirits of our profession who will find their practice among patients who earn more than \$25 a week? Think it over.

There is another element that enters into our study of health insurance in this country, and that is the life insurance companies. The Metropolitan Life Insurance Company has made several health surveys, one of which is quoted in the report on social insurance of the American Medical Association. This report has the appearance of a scientific document by being published in the medical journal, but the sickness survey was not made by physicians, but is a mass of evidence on sickness collected by laymen from other laymen. The object of the Metropolitan Life Insurance Company in making this health survey is not clearly known, but was done probably for some reasons of policy peculiar to the insurance company. There are no reliable nor semi-reliable statistics on sickness in the United States. All attempts at compiling statistics of sickness have been ineffectual, and one man's guess is as good as another's. In July it is said that the Metropolitan Life Insurance Company made a sickness survey in the City of Boston, and through its employees secured returns of sickness from its 50,000 industrial policy holders. The responses received were said to have been 97,000, 2% of whom were said to be sick. The actuary takes those figures and he computes the money loss in wages of the sick for the day, and he finds out the money loss for a week, then for a year, and by the time he has finished his actuarial investigations, the money loss for sickness in the United States is stupendous. It is upon such statements that the advocates of this measure say that health insurance is necessary in the United States.

The insurance is to include everybody who

earns \$25 a week or less. In return there is to be a cash benefit equal to two-thirds of the weekly wages, for not more than 26 weeks in any consecutive 12 months. If the person dies, \$50 is paid. There are also maternity benefits and cash benefits to dependents, dentists' bills, bills for eye-glasses up to \$50. In maternity cases, the cash benefit for the woman shall be 2% of her husband's salary for 10 weeks.

Who is going to take care of all this, and what is to be the cost? There is not an actuary or statistician who will tell you what the cost of this thing is to be in Massachusetts. In Germany the cost has been 4% of the workers' wage. Dr. Frankel at Cincinnati, in a lively discussion where no two advocates agreed as to the cost, said it would be more than 4%, and that no workingman in the United States would stand a tax of 4% of his wage for medical attendance. How many of you have patients who pay you 4% of their wages continuously for years?

How is the cost of this thing to be divided? The State is to pay one-fifth, the employer two-fifths, and the employee two-fifths, unless the worker earns \$9 a week, when the employer is to pay 48%, the employee 32%, and the State 20%, gradually working down to the worker, who earns \$5, who then pays nothing, while the employer pays 80% and the State 20%.

As to the organization. The Commission shall consist of three commissioners appointed by the Governor. The Doten Bill says no word about one of the commissioners being a physician. The draft of the American Association for Labor Legislation says that one commissioner shall be a physician. The State is to be divided into districts or insurance companies, consisting of 5000 people in each local association, making about 200 companies. The local insurance companies shall have boards of directors, made up of persons elected by a committee, which will be elected annually by employers and employees voting equally. Who will run that insurance company after a while? Do I go far afiel when I say that the employees might be influenced in a short time by the employer whose favor they might desire to court?

In the Doten Bill there is the outrageous suggestion that the board of directors should have the power to make contracts for medical and surgical attendance. Then when you get the employer, and the employee, and the efficiency man of the employer, administrating the affairs of the local company, your professional standing is gone, and the doctor simply becomes another employee, for he would be in the hands of the efficiency man.

When the supporters of this bill were asked as to the probable cost of maintenance, no one was willing to make a definite statement. The costs ranged all the way from four to twenty-seven millions. It may cost the workingman

10% of his wages. With a central office, sub-central office, local company, panel doctors, contract doctors, supervising doctors, medical officers, and so on, there is no end to the expenses. In Europe after the war, the law is to be changed, not because of the war, but because of the expense. All writers on this subject are agreed upon this point. In Germany the law is to be changed so that the doctor who treats the patient will not be asked to give a certificate saying when the patient is fit to return to work, but the duty of sending the patient back to work shall devolve on the supervising doctor, and one of the recent suggestions to be incorporated into the law said that it will not only be the duty of the medical officer to give the certificate of good health, but it will be his duty to supervise the work of the attending physician to see that he has treated the patient properly and also that he has not given too expensive medication. The possibilities of this arrangement I leave to your imagination.

Sickness insurance! Did you ever think what that meant? It means that all sickness, no matter how acquired, will be paid for under this act. Do you think it is fair that the industrious man or woman in Massachusetts, who works faithfully and makes sacrifices for their families, should stand for the insurance against sickness of the riotous man or woman? Do you think it is fair? This bill makes no exception in the kind of sickness that afflicts the insured, nor does it except sickness however it may be acquired, so that the decent citizen is put in the same category with the man or woman who dissipates his fortune and his health. All are equal in health insurance.

Another point about the administration of the law: It will be possible under this law for the commission to approve or withhold approval of any hospital. That would mean that we would have the standardization of hospitals, which may be a good thing, and may not. Under the law as suggested, all kinds of political pull would be possible, and in the end, standardization may be a recommendation or it may not, according as political pull may prevail or may not prevail. Under the working of the law it is claimed that local companies, if they have a guarantee fund of sufficient amount, may erect hospitals and maintain them, may erect convalescent homes and maintain them, may erect sanatoria and maintain them. Maintenance of these institutions means the selection and the hiring of doctors and nurses at such prices as may suit the directors of the local companies.

One of the weaknesses of the German system is the convalescent home or sanatorium, where the insured while away their invalidity by taking part in the games in the pool rooms, bowling alleys and billiard rooms in the sanatoria. When called upon to return to work, the strenuous exercise at these games has been too much

for them, and they say they are too weak to enter upon their daily vocations.

Another one of the side lines of the German law is the prevalence of the so-called doctors' strikes. Since the adoption of the law in Germany up to 1911, there have been 1022 doctors' strikes due to a difference of opinion between the companies and the physicians as to the physicians' remuneration, and these conflicts have been very serious. Of these strikes, 921 were decided in favor of the doctors; to quote Mr. Rubinow, "this result alone would indicate that usually the medical profession had real grievances to contend with." So, in Germany, under a health insurance law, doctors do have real grievances. What would a doctors' strike mean? A strike presupposes a union; the union presupposes all the paraphernalia that goes with the union,—walking delegates, pickets, arbitration committees, and all the rest of it. Suppose, for instance, a woman is dying from a post-partum hemorrhage, and the doctor in attendance is in need of assistance. The assistant doctor is on his way, and is about to enter the house of the patient, when he is met by the peaceful picket on the sidewalk, who informs the doctor who is offering his aid that he must not enter the house of the sick person because she is being treated by a scab doctor. How beautifully foreign the whole picture! What an element to inject into the general practice of medicine as we have known it in Massachusetts. The remuneration of the German physician must have been at its lowest ebb when the downtrodden doctor was compelled to strike. Yet Mr. Rubinow, the high priest of health insurance, says these strikes were justified. "*O tempora, O mores.*"

To recapitulate: Social insurance, the child of Russia, was adopted by the German empire, an empire consisting of a homogeneous race of people to the number of sixty-five millions, with one center and one mind in control of the sixty-five millions. Was it medical, or socialistic, or militaristic expediency that caused Germany to adopt the child of Russia? Is the German workingman told, "You are insured against sickness, therefore you don't need much pay for your daily toil." Was he told, "You are insured against old age, and you need not worry about saving." Was he told, you must not worry about unemployment because you are insured against that, and you need not be sorry if you are thrown out of a job." Was it for the safety of the individual or the expediency of the empire?

In Germany the individual follows the line of endeavor of his father. If his father was a wood-carver, he is too, as probably was his grandfather and great-grandfather. This is all for the good of the empire.

Are you ready as citizens to engraft that sort of legislation upon the body politic of Massachusetts? Are you ready to put into the hands

of three men, selected by the governor of the State, such vast powers as this legislation demands, namely, the intimate care of the health of one million of people?

I will not trouble you further. As you walked up these stairs today, you probably looked intently upon those framed pictures which hang upon the walls, and you have studied many times those faces that bring back to you the memories of the great deeds those men whose faces look out from the frames have done. Those men worked well; they wrought well. They were your predecessors in the profession of medicine. They handed to you the care of the sick of the Commonwealth. They gave you that care as a heritage, as a trust. The names of those men, and the deeds they have achieved in medical science are written in the history of the world. It has been our ambition to hold ourselves up to the work of those men, to hand down to our posterity, as they have handed down to us, the function of caring, and caring well for the sick of Massachusetts. Now a body of men from another state ask you to change all that. These men who ask you to make this change talk in figures; they never talk in human units. There is nothing of human sentiment as I understand the human sentiment that exists between the patient and his physician. There is nothing of human sentiment in any of their writings. There is nothing of the underlying currents of religion. Their principles are socialistic, paternal, and antagonistic to American ideals. To men trained as you are to think in the proper way, I give you these thoughts. I ask you to withhold any support to this legislation that you might be inclined on the first impulse to give. I ask you to study faithfully this complex problem, fraught with stupendous changes for the citizens of Massachusetts. If you think it is a piece of legislation that is fitted to the needs and the conditions of the social life of this Commonwealth, support it. If you think it has no place in our body politic, refuse to give it your influence; but in any event, wait, and ask Massachusetts to wait until you and the citizens of the State fully comprehend the import of it all.

Obituary.

JABEZ FISHER, M.D.

JABEZ FISHER, medical practitioner, meteorologist and musician, died at his home in Fitchburg, December 15, 1915, at the age of 92.

He was born in Cambridgeport, April 30, 1824, the son of Jabez and Sarah Livermore Fisher, and was graduated from Harvard Medical School in 1850, joining the State Medical Society in that year

and settling in Fitchburg the following year. In 1855 and 1856 he was elected to the Massachusetts Senate, and the next year relinquished practice and grew fruit as a business. He became organist of the Universalist church in his town and at the time of the Peace Jubilee in Boston, 1870, trained a choir of voices to take part in the great festival. He wrote on musical, religious and social service topics and was especially interested in meteorology. For more than half a century he kept daily records of the weather and furnished data to the United States Government. On several occasions his records were used in court in the settlement of questions as to the weather.

Dr. Fisher was twice married and is survived by a son.

Correspondence.

INDUSTRIAL HEALTH INSURANCE.

Mr. Editor:

The *Doten Bill* vitally affects not only physicians, but many other professions and industries. It should be discussed from a broad American viewpoint even by physicians as, if passed, it means sweeping and revolutionary changes in our whole social structure of more importance, possibly, than anything which has occurred in the history of our government. Among other things it will mean:

1. Prussianizing the medical profession.
2. Creating caste distinctions such as this country has never seen, based upon wages; not to mention the caste system forced on the medical profession through either a panel or contract regulation.
3. Practically removing the right of the laboring classes to choose their physician or method of treatment and forcing certain ones—the Christian Scientists, for instance—to be taxed in support of methods which, to them, are unacceptable on any terms.
4. Creating a commission of high-salaried officials with czar-like powers, who will be able to levy taxes on labor, on capital and on the state. In so doing they will reduce wages, add to the high cost of production and increase general taxation.

The administration of this movement will be expensive beyond all estimates and this commission has the power to draw *any amount needed*, as follows: Forty per cent. from wages, forty per cent. from the employers of labor, twenty per cent. from the State Treasury.

What will it need? Enough to provide for all cost of sickness, physicians' and surgeons' fees, medicine, surgical and nursing supplies, nurses, hospitals, sanitaria, sick benefits (two-thirds wages, twenty-six to fifty-two weeks), dentistry and dental supplies, maternity benefit, death benefit, benefit for widows and orphans.

This is fine! But does the laboring man and the employer, as well as the average citizen, want this measure forced on him without regard to the costs? Do the working people want to be forced into a class by themselves where they cannot employ their own physician without losing all they had been compelled to pay? Do they want an *aristocracy* based on right to employ a private physician or healer?

Workmen should be given a chance to know that this *Doten bill* makes insurance in the state society compulsory for everyone earning less than \$100.00

per month. How about those getting \$101.00 per month? If good for the poor, why not for the rich?

Employers should consider whether they can stand another tax on industry to the extent of the payments demanded on every man they employ.

Tax payers should be warned that the Doten bill authorizes this commission to levy an unknown amount on the state treasury.

Retail druggists will be affected seriously by this bill, as all drugs, surgical and nursing supplies are furnished by the commission.

Members of fraternal orders should know that they have to pay their full assessment in this society without expectation of full benefits, as benefits under this bill are to be reduced by the amount an individual is receiving from all other sources.

Insurance companies will thus be virtually forced out of business so far as accident or sick benefit business is concerned. Remember that insurance is compulsory for all in the very large class indicated by the bill.

Physicians, in addition to the fact that your profession is to be divided by law into consulting physicians, panel physicians and general down-and-outs, not to mention the pure aristocrats of the profession who will cater to the wealthy only, consider the possible tendency of a large part of the profession to degenerate into contract doctors, political wire-pullers and grafters.

Finally, do free American citizens want it? Is it American? Is it democratic? Do we wish to follow in the footsteps of Germany, Russia and England without the most careful investigation? Do the thrifty and industrious and healthy wish to be taxed for the benefit of the natural loafer who makes himself dependent through his own habits and vices? Those of us who have had experience in filling out blanks for sick benefits know the tendency. Do we want more of it?

Personally, the writer believes that social health insurance, as conceived by the Doten bill, will prove a blight on our civilization, and that there has never been a bill introduced carrying greater opportunities for evil in the form of graft and extravagance. Until something better can be framed it is hoped that our legislators will have common sense enough to turn it down in its entirety. Because we need a horse, there is no reason why we should accept an elephant.

Very truly yours,

WILLIAM W. HARVEY, M.D.

114 Fenway, Boston, Dec. 20, 1916.

INDUSTRIAL HEALTH INSURANCE.

Office of the Medical Examiner,
Third Bristol District,
Fall River, Mass.

December 21, 1916.

Mr. Editor:

Your Health Insurance Issue of December 21 was a bitter disappointment. With the exception of Dr. Hurley's article, the wrong note was struck all the way through. Dr. Cotton's statement that health insurance would come and that we would have to make the best of it indicates a surrender even before an attack is made. Were it made to men with the common sense of bricklayers or longshoremen, it would undoubtedly meet with a rather warm reception. Dr. Anthony's statement that we must not forget that ten thousand seeded in the British Medical Association would strongly indicate that he is not ready to take any chances and that quitting before the fight is opened is also the best policy to him. Your editorial emphasizing the humanitarian side of the question is probably capable of inspiring no greater regard for your courage. Humanitarianism that will dis-

rupt and dishonor the medical profession would be a misnomer. Your attitude is a repetition of the fallacy that medical men are either supermen or angels, which to those who know them intimately is absurd.

The fact that the English medical profession failed to hold together, does not mean that that would hold true here. They had very little to lose in any form of practice. The English were largely members of lodges throughout the whole country, and there was slight difference between the old and the new systems. The Massachusetts physician has a great deal more at stake and would be far more willing to fight for his rights. It is ridiculous that a highly specialized and compact service such as medicine is to have to surrender except under terms of their own making. There is no need of putting themselves in the position of beggars to take what may be given them, and the attitude of the health insurance issue is that we must consider everything and everybody before we think of our own welfare. It is inconceivable that this bill will ever be known as a doctors' bill in that it will give proper consideration to physicians. There never has been such a bill and there never will be one, and it is our own fault. If it becomes a law it will surely carry with it much less income to the medical profession at a time when the profession needs a larger income.

It is inconceivable that this act will bring as good service to the people. If this be true, it would be difficult to see humanitarianism in any direction. The safety of the people and the safety of the profession demand that no such bill ever become a law. Under any circumstances, it seems to me, that your position would warrant your safeguarding the interests of the medical profession above all else. There will be plenty of others to take care of the other interests concerned.

Very truly yours,
THOMAS F. GUNNING, M.D.

INDUSTRIAL HEALTH INSURANCE.

Shelburne Falls, Mass., Dec. 22, 1916.

Mr. Editor:

I have been following your editorials on Industrial Health Insurance with much interest. Apparently you are constituting yourself champion of some form of such insurance. In your official position, is that a just and proper policy until you know what the attitude of the profession, whom you are supposed to represent is toward it? Would it not be more fair to take a vote on the subject and then take your stand accordingly?

In this section, at least, the great majority of the profession are strongly against it. The benefits to be obtained by such legislation are problematical, to say the least, for any of the parties concerned and the measure is worthy of serious consideration before being accepted as certain to accrue to anyone's benefit except the insurance companies?

I do not wish to discuss the matter at length, but will point to one thing alone. Do we wish for a socialistic state and nation or an individualistic one as we always have been? And, if socialistic, why single out one class to experiment on? Why not let all share alike in the benefits and ills of the Socialists' paradise?

If this measure is to be forced upon us, Mr. Editor, I agree with you that the profession must look after its own interests in the shaping of the bill; but, if the profession is against the measure, let us first try to beat it in *toto*. Give us a vote and see where we stand and then let us have concerted action.

Very sincerely yours,
CHARLES L. UPTON, M.D.
Univ. of Penn., '96.

SOUND ADVICE FROM A FORMER GENERATION.*

* The following letter, a copy of which was sent us by a correspondent, deserves publication for its sound advice from a famous surgeon of a former generation.—Editor

Mr. Davis Thacher Lewis,
Castleton, New York.

My dear Sir,

I am truly happy to hear from your good father that you are proceeding with studys in the science of anatomical knowledge, which is the foundation of our science, without which you will have no confidence in yourself or the public have any in you.

In obtaining a knowledge of anatomy a system of study is required or its impression will soon fade in your memory, for you may dissect the muscles of an arm, and forget them in a year, or remember them for life, according to the view you take of the subject. For example, ask yourself which are the seven muscles which arise from the scapula and are inserted into the os humeri? What the four muscles which bend and straighten the forearm? Which the four which roll the radius, to which you may add the biceps? What the three flexors and three extensors of the hand; the three flexors and three extensors of the thumb; the abductor and adductor; the extensor of the forefinger, and its abductor? The muscles which separate the fingers and bring them together? Lastly, the muscles of the palm of the hand?

Dissect and recall them in this way and you will acquire anatomy and physiology so as not to forget what you have once acquired. You are in a country which opens wide field for science and for practice, in which you have not to contend with numbers, unlike us, being three in a bed; but you have plenty of room to make your way without jostling against other doctors. You will have no excuse for want of success, which is said to be the result of knowledge, character, industry and giving no offence.

"If hindrances obstruct your way,
Your magnanimity display,
And let your strength be seen.
But, oh! if fortune fills your sail
With more than a promising gale,
Take half your canvas in."

Be candid and kind to your medical brethren, and never blazon their faults, but conceal them. Speak little, think much; do not write until you have something important to communicate, but recollect the proverb, "O that my enemy would write a book!"

Never write upon any subject which you cannot demonstrate.

With very good wishes, believe me yours truly,
London, March, 1836. ASHLEY COOPER.



CHANGES IN THE MEDICAL CORPS, U. S. NAVY.

October 30.

P. A. Surgeon P. R. Stainaker, detached *Columbia* to waiting orders.

P. A. Surgeon O. J. Mink, to *Columbia*.

October 31.

Surgeon R. W. Plummer, detached *Alabama* to *North Dakota*, additional duty on *Alabama*.

P. A. Surgeon C. H. Dragoo, detached Naval Hospital, Newport, R. I., to Naval Training Station, Newport, R. I.

November 6.

P. A. Surgeon G. W. Shepard, detached *Norfolk* Receiving Ship, to Training Station, at St. Helena, Va.

P. A. Surgeon H. A. May, to Naval Hospital, Annapolis, Md.

November 7.

P. A. Surgeon N. T. McLean, to Washington, D. C., for promotion.

Asst. Surgeon W. S. Wentzel, resignation accepted, to take effect November 8, 1916.

Asst. Surgeon W. W. Wickersham, detached *Prairie* to *Maine* Expeditionary Forces, Santo Domingo, D. R.

P. A. Surgeon A. B. Clifford, detached *Washington* to *Virginia*.

Asst. Surgeon H. A. Tribou, detached *Virginia* to *Tacoma*.

Surgeon G. F. Freeman, to Naval Hospital, Boston, Mass.

P. A. Surgeon R. F. Sheehan, detached Naval Medical School to *Culgoa*.

P. A. Surgeon W. G. Farwell, detached *Culgoa* to wait orders.

P. A. Surgeon J. G. Ziegler, detached Coast Torpedo Force, Pacific Fleet, to *Chattanooga*.

Surgeon R. B. Henry, to Naval Training Station, Norfolk, Va.

P. A. Surgeon M. Donelson, detached Receiving Ship, at Norfolk, Va., to *Pennsylvania*.

November 15.

Surgeon M. H. Abes, detached *Salem* to *Maine*.

P. A. Surgeon F. L. Porter, detached *San Francisco*, to Washington, D. C., to wait orders.

P. A. Surgeon F. E. Porter, detached *San Francisco* to wait orders.

P. A. Surgeon G. C. Rhoades, detached Naval Hospital, Norfolk, Va., to *San Francisco*.

November 16.

P. A. Surgeon M. H. Ames, detached *Salem* to *Maine*.

P. A. Surgeon R. B. Henry, to Training Station, Norfolk, Va.

P. A. Surgeon W. N. McDonell, detached *Pennsylvania* to *Montana*.

P. A. Surgeon M. Donelson, detached Receiving Ship at Norfolk, to *Pennsylvania*.

November 17.

Asst. Surgeon W. B. Hietfield, detached *Monocacy* to Olongapo, P. I.

Asst. Surgeon C. S. O'Brien, detached Canacao Hospital to *Villatobos*.

Asst. Surgeon H. V. Cornett, detached *Villatobos* to Canacao Hospital.

Asst. Surgeon S. M. Taylor, detached Olongapo Hospital to *Monocacy*.

Asst. Surgeon G. W. Calver, detached *Brooklyn* to Yokohama Hospital for treatment.

November 21.

Surgeon G. F. Freeman, to Navy Yard, Boston, Mass.

Asst. Surgeon R. L. Crawford, detached *Rhode Island* to *Smith*.

November 22.

P. A. Surgeon W. L. Findelisen, detached Navy Recruiting Station, Detroit, Mich., to Naval Training Station, Newport, R. I., December 8.

November 24.

P. A. Surgeon P. R. Stainaker, to Training Station, Newport, R. I.

P. A. Surgeon G. E. Robertson, detached *Memphis* to *Arkansas*.

Asst. Surgeon C. H. Weaver, detached *Arkansas* to *Paducah*.

December 2.

Asst. Surgeon L. B. Wiggs, to Naval Recruiting Station, Columbia, S.C., December 11.

Asst. Surgeon O. C. Foote, detached *Delaware* to *Stevens*.

Surgeon F. E. McCullough, detached *Florida* to *Oklahoma*.

P. A. Surgeon C. H. Dragoo, detached Naval Training Station, Newport, R. I., to Navy Recruiting Station, Detroit, Michigan, December 2.

December 4.

Surgeon M. K. Johnson, detached *Oklahoma* to home and wait orders.

Commissioned Assistant Surgeons M. R. C., from November 7: K. E. Lowman, E. J. Stein, E. E. Koatbe, L. H. Clerf, E. C. Carr, E. A. Brown, J. H. Durrett, A. C. Smith, M. T. Clement.

Commissioned Assistant Surgeons from November 4: S. P. Taylor, Jr., A. Robinson.

Asst. Surgeon A. J. Sullivan, commissioned from October 7, 1916.

December 6.

Surgeon R. B. Williams, Marine Expeditionary Force, Haiti, to *Florida*.

December 8.

P. A. Surgeon W. J. Zalesky, detached Naval Recruiting Station, Brooklyn, to New York Hospital.

P. A. Surgeon T. W. Raison, detached Naval Hospital, Great Lakes, to Marine Expeditionary Force, Santo Domingo.

P. A. Surgeon H. F. Lawrence, detached Naval Hospital, New York, to Marine Expeditionary Forces, Santo Domingo.

P. A. Surgeon D. H. Casto, detached Marine Brigade, Port au Prince, Haiti, to wait orders.

P. A. Surgeon W. G. Farwell, to Navy Recruiting Station, Brooklyn, N. Y.

Asst. Surgeon A. C. Smith, to Naval Hospital, New York.

Asst. Surgeon L. N. Clerf, to Naval Hospital, Great Lakes, Ill.

Asst. Surgeon M. T. Clement, to Marine Barracks, Port Royal, S. C.

December 9.

P. A. Surgeon F. E. Sellers, detached *Kearsarge* to *Panther*.

P. A. Surgeon N. T. McLean, to Sanitary Engineer, Haiti.

P. A. Surgeon Sankey Bacon, detached *Panther* to wait orders.

P. A. Surgeon F. E. Porter, to Navy Recruiting Station, Portland, Me.

P. A. Surgeon J. B. Pollard, detached Naval Academy, Annapolis, Md., to Naval Hospital, Norfolk, Va.

BELGIAN PHYSICIANS' RELIEF FUND.

REPORT OF THE TREASURER OF THE COMMITTEE OF AMERICAN PHYSICIANS FOR THE AID OF THE BELGIAN PROFESSION, FOR THE QUARTER ENDING NOVEMBER 30, 1916.

CONTRIBUTIONS.

Dr. Edward E. Maver, Pittsburgh, Pa.	\$ 10.00
Dr. W. C. Cahall, Philadelphia, Pa.	1.40
(3d contribution)	

Receipts for the quarter ending Nov. 30 \$ 11.40

Previously reported receipts \$7,946.86

Total receipts \$7,958.26

PREVIOUSLY REPORTED DISBURSEMENTS

1625 Standard Boxes of Food, at \$2.20	.... \$3,575.00
1274 Standard Boxes of Food, at 2.30	.... 2,930.20
353 Standard Boxes of Food, at 2.28	.... 804.84

Total disbursements \$7,310.04

Balance \$ 648.22

F. F. SIMPSON, M.D., *Treasurer*.

7048 Jenkins Arcade Bldg., Pittsburgh, Pa.

NOTICE.

BOSTON CITY HOSPITAL OPERATIVE CLINICS.—In addition to the Saturday general operating day for all surgical services already announced, there will also be, until further notice, operative clinics of individual services as follows:

Tuesdays, 9 A.M. Dr. Lothrop.

Thursdays, 10 A.M., Drs. Thorndike, Blake, Cotton and Faulkner.

Fridays, 10 A.M., Drs. Lund, Hubbard and Cunningham.

These operative clinics will be held in the surgical amphitheatre.

On Fridays, 10 A.M., in special operating room, Drs. Nichols, Scannell and Howe.

SOCIETY NOTICES.

HAMPSHIRE DISTRICT MEDICAL SOCIETY.—The regular meeting of the Hampshire District Medical Society will be held at Boyden's, Northampton, January 10, at 11:30 A.M. Papers: Vincent's Angina, Dr. W. J. Collins; Mouth Infections in their Relation to Systemic Diseases, Dr. P. A. Hudnut. Luncheon at 1 P.M.

NORFOLK SOUTH DISTRICT MEDICAL SOCIETY.—Meeting for medical improvement at United States Hotel, Boston, Thursday, Jan. 4, 1917 at 11:30 A.M. Reader: Frederick T. Lord, M.D., of Boston. Subject: Pneumonia. For E. H. Bushnell, M.D., of Quincy.

F. H. MERRIAM, M.D., *Secretary*,
South Braintree, Mass.

MASSACHUSETTS SOCIETY OF EXAMINING PHYSICIANS.—There has been considerable discussion regarding the Workmen's Compensation Act as it applies to physicians and workers. This Society will hold a meeting at the Copley-Plaza Hotel on Jan. 8, 1917, which will be addressed by I. M. Rubinow, M.D., Secretary; Council Health and Public Instruction, A. M. A.; Frank Dresser, Manufacturers' Association; Frank P. Meade, American Federation of Labor.

As many of the Council of the Massachusetts Medical Society have expressed their desire to be present, an invitation is extended to all the members of the Council of the Massachusetts Medical Society.

J. H. STEVENS, M.D., *Secretary*.

THE MASSACHUSETTS THERAPEUTIC MASSAGE ASSOCIATION.—The next meeting will be held at the Hotel Brunswick on Thursday, January 11, 1916. The managers will meet at 7:30 P.M. Dr. Robert M. Green, Editor of the BOSTON MEDICAL AND SURGICAL JOURNAL, will address the Society on The Mechanical Treatment of Abdominal Ptosis and Associated Postural Defects. Members of the medical profession invited. Please be prompt and thus show your appreciation.

DOUGLAS GRAHAM, M.D., *President*,
MRS. MABEL F. WALKER, *Secretary*.

APPOINTMENT.

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL.—Dr. Roy G. Hoskins has been appointed associate professor of physiology.

RECENT DEATH.

DR. PAUL VON BRUNS, who died recently in Germany, was born on July 2, 1846. After serving throughout the Franco-Prussian War, he studied medicine, and in 1875 he became privatdozent at the University of Tübingen. In 1877 he was appointed professor extraordinary of surgery, and in 1882 full professor and director of the surgical clinic at Tübingen, succeeding his father, Dr. Victor von Bruns, in this position. In 1883 he founded the *Beiträge zur Klinischen Chirurgie*, which he edited until his death. He was the author of many papers on laryngeal surgery, on gunshot wounds, surgery of goitre and of umbilical hernia, the treatment of fractures of the lower extremity, acute osteomyelitis, and the use of antiseptics.